

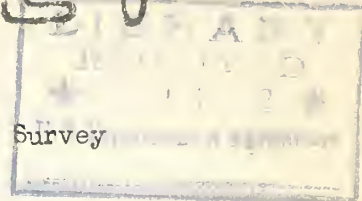
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# THE SURVEY

Monthly House-Organ of the Bureau of Biological Survey  
United States Department of Agriculture



Vol. 3

Washington, D. C., January 14, 1922

No. 1

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the bureau, movements of the staff, changes in assignments, and news and personal items of importance to bureau workers, with a view to increasing the interest of the personnel in the work of the bureau as a whole and in each one's individual work as related to it. It is intended for employees of the bureau, supplementary to the Departmental house-organ, The Official Record, the first number of which appeared on January 4, 1922.

## GENERAL NOTES

With this issue, the first of its third year, THE SURVEY pays its respects to a new entrant in the field of "house-organs," The Official Record of the United States Department of Agriculture, the initial number of which made its appearance under date of January 4, 1922. To help make the new publication of interest to departmental workers as a whole and at the same time of service to members of the bureau, THE SURVEY has contributed much of its own life blood, as will be noted from the columns. This will tend to make the bureau organ smaller in size but will not vitiate it: it still has its field of service as a supplement to the department weekly and will continue to issue about the middle of each month, as formerly. The Official Record will reach all employees on the rolls of the department, and for this reason attempt will be made not to repeat in one organ news items appearing in the other.

Note may here be made of the passing of a familiar friend, The Weekly News Letter, the last issue of which appeared under date of December 7, 1921. This is in accordance with an Act of Congress of March 4, 1921, which suspended the publication after December 1 of many of the Government periodicals. So far as its usefulness to employees of the department is concerned, this, with many added services, will be continued in The Official Record.

The following Committee on THE SURVEY has been designated by Dr. Nelson for the year 1922: Dr. W. B. Bell, chairman, representing Economic Investigations; W. C. Henderson, representing the bureau as a whole; Edward A. Preble, Biological Investigations; E. R. Kalmbach, Food Habits Research; H. F. Stone, Game and Bird Reservations; W. Roy Dillon, Migratory-Bird Treaty and Lacey Acts; Dr. T. S. Palmer, Importations; W. F. Bancroft, Alaska Investigations; Wm. H. Cheesman, Editor.





Dr. Nelson completed his annual tour of inspection through the Western States in time to attend the opening session, on December 15, of the Advisory Board under the Migratory-Bird Treaty Act.

After an interval of nearly two years, the evening meetings of members of the scientific staff of the bureau were resumed on January 10, with a session at the home of Mr. and Mrs. Vernon Bailey. In addition to hearing from Dr. C. Hart Merriam, first chief of the Biological Survey, and from others on their investigations in places so far separated as Alaska and Argentina, and California and Prince Edward Island, those attending had opportunity to see the live rodents being kept under observation by Mr. Bailey and to note his methods. Leaders in the discussions, all of which were very brief, were Messrs. Nelson, Merriam, Hadwen, Wetmore, Lincoln, Ashbrook, Goldman, and Silver.

The National Game Conference of the American Game Protective Association, which convened in New York City December 12 and 13, was attended by the following representatives of the Biological Survey: Dr. A. K. Fisher, W. C. Henderson, G. A. Lawyer, H. F. Stone, and F. C. Lincoln. Dr. Fisher read a paper on "The Effect of Rodent Poison on Birds," and Mr. Lincoln presented one on "Knowledge Gained from Banding Waterfowl." The meeting was voted a success and had the largest attendance of any in the history of the organization. A considerable number of the States were represented by their game commissioners, and the Governors of Wyoming and Utah also were present. Fully 450 guests were at the banquet at the close of the session on Tuesday evening. One of the dishes served was reindeer meat.

Assistant Chief Henderson left Washington on January 8 for various points in the West on a tour of inspection. During his trip he will visit many of the field stations of the bureau; attend the annual convention of the American Live Stock Association at Colorado Springs; and, at Salem, Oreg., confer with the attorney-general and others on matters pertaining to the Malheur Lake Bird Reservation. His return trip will enable him to confer with officials and others in the Southwest, and will include visits early in February to bureau offices in Sacramento, Phoenix, and Albuquerque.

The following bureau publications were issued in December:

Annual Report of Chief of Bureau for 1921; pp. 34; received December 6.

S. R. A.-B.S. 44. "Fishing on Big Lake Reservation, Arkansas: Nets and Other Set Fishing Tackle;" p. 1; issued December 9.

Farmers' Bulletin 1239, "Community Bird Refuges," by W. L. McAtee, Assistant in Charge, Food Habits Research; pp. 13, figs. 3, illustrated cover containing inset of young kingbirds from photograph by I. N. Gabrielson; received December 21.

Farmers' Bulletin 621 (revised), "How to Attract Birds in Northeastern United States," by W. L. McAtee; pp. 16, figs. 11 (the chief changes are in title page illustration and in the inclusion of a new table - table 2, on page 13); received December 27.

Among manuscripts submitted in December for approval for outside publication were the following:

1. The first part of the document is a list of names and addresses, which are arranged in two columns. The names are written in a cursive hand, and the addresses are written in a more formal, printed style.

2. The second part of the document is a list of names and addresses, which are arranged in two columns. The names are written in a cursive hand, and the addresses are written in a more formal, printed style.

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6. The sixth part of the document is a list of names and addresses, which are arranged in two columns. The names are written in a cursive hand, and the addresses are written in a more formal, printed style.

Bell, W. B., "Eradicating Rodent Pests in Cooperative Drives," for The Producer.

Dalrymple, Bud, "Cleaning up on the Gray Wolves," for Fur News.

Hadwen, Seymour, "Effects following Improper Methods of Extracting Hypodermis Larvae from the Backs of Cattle," for The Journal of the American Medical Association.

McAtee, W. L., "Thoughts on English Names for Birds in the A. O. U. Check-List," for The Auk.

Taylor, W. P., "Some Birds and Mammals of Mount Rainier," for The Mountaineer Annual, of the Seattle Mountaineers.

#### BIOLOGICAL INVESTIGATIONS.

A Christmas bird census was made on December 24, by W. L. McAtee, Edward A. Preble, and Alexander Wetmore, in accordance with their annual custom. The all-day walk covered the region of Dogue Creek and Little Hunting Creek, near Mount Vernon, Virginia. A list of birds-numbering 47 species-was made, which is the next largest number ever observed by them on a similar trip at this season. The highest comparable record was made on December 30, 1916, when the same observers saw 48 species in the course of a trip which covered practically the same ground.

George G. Cantwell, who has been connected with the Biological Survey since 1914, resigned on December 31. He was appointed Reservation Inspector in 1914 and served until 1919, when he joined the staff of Biological Investigations for work in Washington State. With the close of regular field work in the State, he preferred to relinquish a position which he feared would necessitate long absences from his home in Puyallup. He leaves the service with the best wishes of his associates.

Vernon Bailey was chosen President of the Biological Society of Washington, at the annual election of officers on December 10. The first meeting of the year was held on January 4, a combination session with the Wild Flower Preservation Society and the local Audubon Society to see pictures of the birds and wild flowers of the Yosemite National Park, illustrating a talk by A. C. Pillsbury, of the National Park Service. The Biological Survey was well represented in the audience.

#### ECONOMIC INVESTIGATIONS.

Dr. Karl B. Hanson, of the U. S. Experimental Fur Farm, Keeseville, N. Y., and Frank G. Ashbrook, of this office, were in attendance at the Silver Fox Show given by the National Silver Fox Breeders' Association of America at Muskegon, Mich., December 7-9.

Dr. Hanson examined all of the foxes entered in the show to see that no contagious disease was brought into the building and looked after the general health of the animals during the show. In order to bring the different class distinctions to the attention of breeders the bureau furnished a panel showing eight colored pictures of fox pelts ranging from the red fox on through the cross series to the silver and black. These helped to make clear what is meant by such

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classes of fox pelts as 75 per cent silver, 50 per cent silver, 25 per cent silver, 10 per cent silver, and black, and the relationship of the various commercial fox pelts to the original red stock.

Mr. Ashbrook discussed with breeders the matter of feeding, breeding, management, and judging of foxes and other matters of interest to the fox producers. He served on a committee to change the old standard and formulate a new schedule of points during the progress of the show. The old standard was discarded and a new standard adopted, the more essential changes of which have to do with changing the number of points credited to size. In a general way it may be said that this show was far superior in the quality of stock exhibited to that of the previous year.

A contract has been completed with the Fouke Fur Company, St. Louis, Mo., for the sale of pelts taken in connection with the predatory animal operations. Lisle Morrison went to St. Louis on January 11 to arrange final details of marking, shipping, checking, and reporting on the skins. Final arrangements will be completed in a few days so that shipments may be made for inclusion in the next sale, which will probably be held in March.

Two important changes have been made effective January 1 in the district organization for rodent control. North and South Dakota were made separate districts. R. Scott Zimmerman, formerly in charge of work in both States, will continue in charge of the North Dakota district with headquarters at Agricultural College. Herbert Wells will be leader of the new South Dakota district with headquarters at Rapid City.

A similar change has been made in the Colorado-Kansas district. Joseph Keyes will remain as leader of the Colorado work, and Otis Wade has been assigned as leader of the Kansas district, with headquarters at Manhattan.

Reports from the field show excellent results being obtained in the coyote poisoning campaigns through the use of the specially processed strychnine prepared at the Denver laboratory. This method of combating coyotes is proving to be one of the most important factors in the control of these abundant animals.

Arrangements have been made for Dr. W. B. Bell, and Frank G. Ashbrook to attend a special meeting of the American Fox Breeders' Association at Boston, Mass., January 18. Dr. Bell will discuss features of the Department of Agriculture organization designed to be of service to the fox production industry and Mr. Ashbrook will present matters relating to the establishment of a national herd book.

Messrs. Piper, Keyes, and Young were authorized to attend the American National Live Stock Association meetings, at Colorado Springs, January 12-14; and Messrs. Sans, Holman, and Richards to attend the meeting of the National Wool Growers' Association, at Salt Lake City, January 9-10.

#### FOOD HABITS RESEARCH.

Mr. E. R. Kalmbach is continuing his work on the control of blackbirds in Imperial Valley, California.



Mr. Franklin P. Metcalf of this division and Miss Mabel Truss were married on December 20. The honeymoon was spent in North Carolina. Mr. and Mrs. Metcalf have the best wishes of the office staff.

#### GAME AND BIRD RESERVATIONS.

Warden George M. Riddick of the Big Lake Bird Reservation, Ark., reports that violations have not been numerous and that the place where depredations have occurred this season is in a remote corner of the reservation which, on account of low water, is difficult of access. He also reports that he has heard fewer guns around the preserve than at any time since he took charge of the reservation in 1918.

Warden A. R. Hodges, of the National Bison Range, notifies us that one of the white-tail fawns, recently donated to the Bison Range by Frank Conley, of Deer Lodge, Montana, has been killed by a coyote. Further depredations of this kind will be prevented so far as possible.

Three thousand elk are now at the Elk Refuge in Wyoming, but Warden D. C. Nowlin states that feeding of hay has not yet started, though it is thought that it must soon begin as there are now 14 inches of snow on the Refuge. Bryan Nowlin has returned to the Refuge, following a temporary assignment to the National Bison Range.

Great numbers of ducks are reported by Warden Neil Gelant to be at the Dungeness Spit Bird Refuge, Washington.

In his report for the month of December, 1921, Warden Paul Kroegel of the Pelican Island Reservation, Florida, states that young birds are hatching all over the island and that there are about 200 nests with eggs on one of the east islands.

#### MIGRATORY BIRD TREATY AND LACEY ACTS.

Chief Warden Lawver attended the annual meeting of the New York State Fish, Game, and Forest League at Binghamton, N. Y., December 8 and 9; and on December 12 and 13 the Eighth Annual Game Conference of the American Game Protective Association in New York City.

On December 15 a meeting of the Migratory Bird Advisory Board was held at the Cosmos Club, Washington, D. C., for the purpose of considering proposed changes in the regulations under the Migratory Bird Treaty Act. Seventeen members of the Board were in attendance and in addition there were 11 interested persons present (including Mr. J. B. Harkin, Commissioner of Canadian National Parks, Ottawa, Canada), at the public session held in the forenoon. The results of the deliberations of the Board will be made public in a short time.

The bureau recently learned of the marriage on December 9 of Warden Burdette J. Shaver and Miss Bertina J. Strand. Mr. and Mrs. Shaver have the best wishes of the members of the office staff.





Warden Charles P. S. Smith, of Davenport, Iowa, has tendered his resignation, effective December 31. It is understood that he will enter business with his father in Chicago. He has the best wishes of his associates for success in his new work.

The appointment of Warden Thomas P. Hall, Sacramento, Calif., has been terminated, effective January 10.

Deputy Warden William A. Connor reports that several times in the last few weeks crude oil escaping in open water along the coast of Rhode Island has covered a vast area and destroyed property valued at thousands of dollars, including shellfish and great numbers of migratory birds. He reports collecting and burying nearly 900 black ducks which had been killed by coming in contact with the oil. The source of the pollution has not yet been learned.

The following appointments were made to the position of U. S. deputy game warden during the month of December:

Aldo Leopold, 135 South 14th St., Albuquerque, N. Mex.

Andrew R. Hodges, Moiese, Mont.

Frank W. King, Ferguson, Iowa.

A. T. Rainwater, P. O. Box 93, Maxwell, N. Mex.

Thomas L. Hall, Glenwood, Iowa.

Cases Terminated - Reports received during December.

| <u>Warden</u>             | <u>Cases</u> | <u>State</u> | <u>Violation</u>                                      | <u>Fine</u>            |
|---------------------------|--------------|--------------|---|------------------------|
| Asmuth and<br>I. G. Smith | 1            | Wisconsin    | Killing coots and ducks<br>during close season        | \$25                   |
| Barmeier                  | 1            | Illinois     | Killing swallows                                      | \$10 and costs         |
| Barmeier and<br>Merrill   | 1            | Illinois     | Killing doves during<br>close season                  | \$25 and costs         |
| Bloxsom                   | 1            | Maryland     | Killing sandpipers                                    | \$ 5 and costs         |
| Bloxsom                   | 1            | Maryland     | Killing ducks during<br>close season                  | \$50 and costs         |
| Bloxsom                   | 1            | Maryland     | Killing willet  | \$10 and costs         |
| Bloxsom                   | 1            | Maryland     | Killing willet  | \$10                   |
| Hoffman                   | 3            | Alabama      | Hunting ducks from<br>motorboat                       | \$20 each              |
| Pacetti and<br>Whitehead  | 1            | Georgia      | Purchasing ducks                                      | \$20                   |
| Merrill                   | 1            | Illinois     | Killing wood ducks                                    | \$10 and costs         |
| Merrill                   | 2            | Illinois     | Illegal transportation<br>of ducks                    | \$10 each and<br>costs |
| Shaver                    | 1            | Minnesota    | Killing woodpecker                                    | \$ 1                   |
| Smith, B. E.              | 1            | Maine        | Hunting after sunset                                  | \$10                   |
| Smith, B. E.              | 2            | Maine        | Killing wood ducks                                    | \$10 each              |
| Smith, B. E.              | 3            | Maine        | Possessing ducks in<br>storage during close<br>season | \$10 each              |



## Cases Reported to Solicitor for Prosecution.

| <u>Warden</u>              | <u>Cases</u> | <u>State</u> | <u>Violation</u>                        |
|----------------------------|--------------|--------------|---|
| Charlton                   | 2            | Ohio         | Killing ducks during close season       |
| Charlton                   | 2            | Ohio         | Killing loons                           |
| Ehlers*                    | 1            | Indiana      | Possessing heron                        |
| Farnham and<br>B. H. Smith | 9            | So. Carolina | Hunting ducks after sunset              |
| Hoffman                    | 1            | Alabama      | Hunting ducks after sunset              |
| Holmes                     | 3            | Nebraska     | Killing ducks from motorboat            |
| Mushbach                   | 9            | Montana      | Killing curlews                         |
| Ransom                     | 2            | Montana      | Killing ducks after sunset              |
| Singee                     | 1            | Texas        | Killing meadowlarks                     |
| Smith, C.P.S.              | 2            | Iowa         | Hunting ducks after sunset              |
| Smith, C.P.S.              | 2            | Iowa         | Illegal transportation of ducks         |
| Smith, C.P.S.              | 2            | Iowa         | Possession of unlawfully captured ducks |
| Smith, C.P.S.              | 3            | Iowa         | Hunting ducks from a motorboat          |
| Steele                     | 2            | Washington   | Hunting ducks after sunset              |
| Visart                     | 2            | Arkansas     | Killing wood ducks                      |
| Visart                     | 2            | Arkansas     | Hunting ducks from motorboat            |

\*U. S. Deputy Game Warden

## ALASKA INVESTIGATIONS

Dr. Seymour Hadwen, chief veterinarian, attended the meeting of the American Association for the Advancement of Science in Toronto, Canada, the last week of December, and delivered the annual public address before the Entomological Society of America on the subject "Northern Bots Affecting Reindeer."

The appointment of Milton S. Clark, of San Francisco, Calif., as a deputy fur warden charged with enforcing the fur laws and regulations applying to Alaska, has been terminated, effective January 1, 1922. Mr. Clark's services were no longer necessary as an open season has been prescribed for beavers and martens in Alaska, and as few, if any, contraband skins arrive at that port.

An amendment to the regulations for the protection of land fur-bearing animals in Alaska, whereby the shooting of fur beavers by natives during the open season will be permitted on the Aleutian Islands Reservation and as far east as Becharof Island on the Alaska Peninsula, was approved by the Secretary on January 6. Under the former regulation it is unlawful to shoot land fur bearers at any time. The change was recommended for the reason that it has been the practice of natives of the region affected to shoot fur animals during the open season instead of trapping them, and as they have no traps it would work a serious hardship, interfering with their means of livelihood during the present winter, not to allow them to substitute the gun for the trap.





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Washington, D. C., February 20, 1922

No. 2

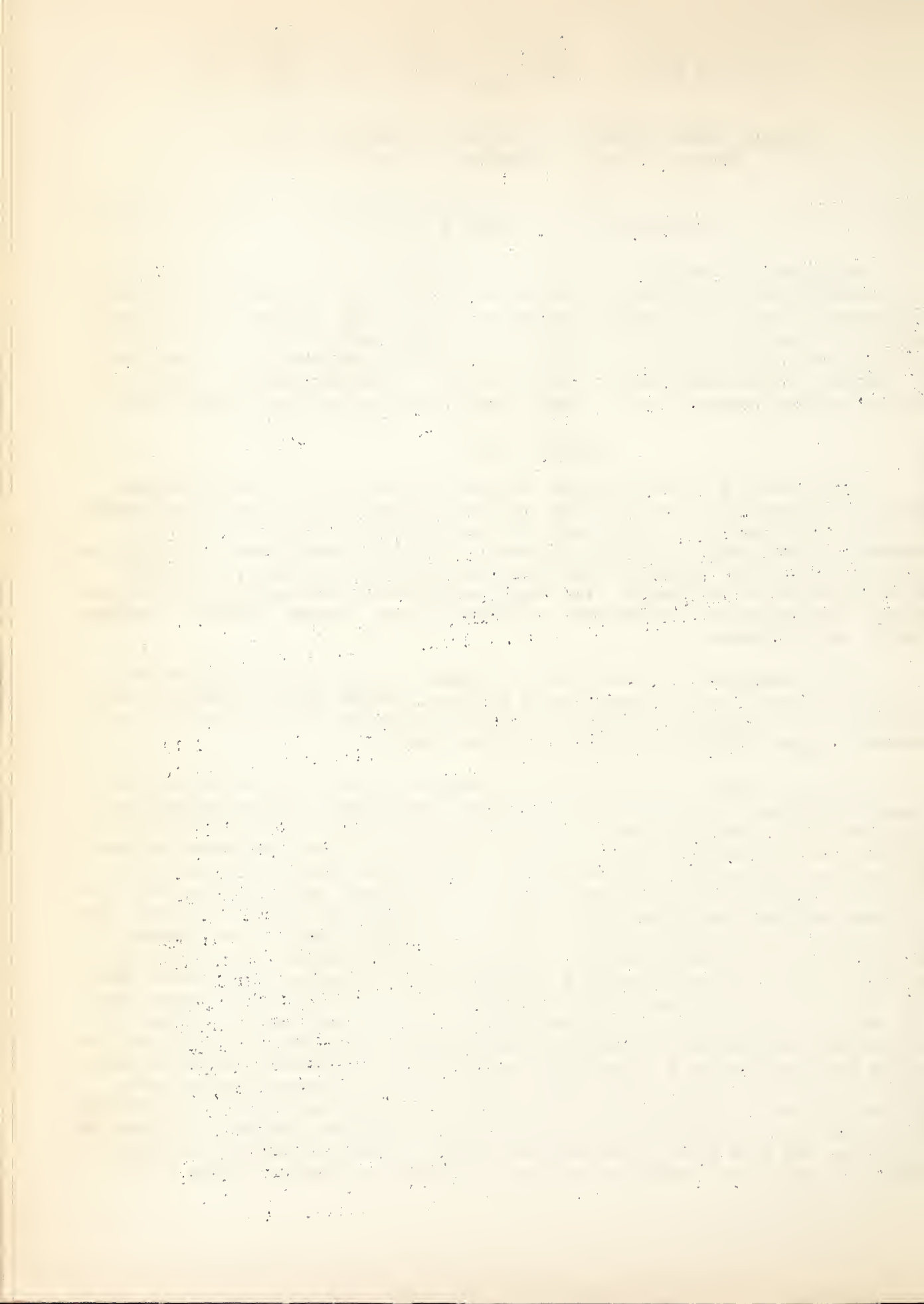
THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the bureau, movements of the staff, changes in assignments, and news and personal items of importance to bureau workers, with a view to increasing the interest of the personnel in the work of the bureau as a whole and in each one's individual work as related to it. It is intended for employees of the bureau, supplementary to the Departmental house-organ, The Official Record.

## GENERAL NOTES

On February 3 a meeting of the business organization of the Government was held in Continental Memorial Hall and was presided over by President Harding, who spoke regarding the results which had been attained during the past six months in a more economical administration of the Government business through the various coordinating agencies created by the Bureau of the Budget. Gen. C.G. Dawes, Director of the Budget, also spoke regarding the work and policies of his office. The Bureau was represented by Messrs. Nelson, Fisher, Goldman, Thompson, Dillon, and Morrison.

W. C. Henderson, Assistant Chief, returned to the office, February 10, after an extended tour of inspection in the West, during which he visited field offices of the Bureau and consulted with State and other officials in Colorado, Montana, Oregon, California, Arizona, and New Mexico.

A recent adverse decision has been rendered by the U. S. Employees' Compensation Commission in the cases of two Biological Survey hunters employed in Colorado on a cooperative basis, and injured while on duty but during their employment on the State roll. The matter was submitted to the Commission for decision as to whether they were entitled to compensation under the Federal Employees' Compensation Act, and the fact pointed out that during part of their employment they were paid from Federal funds and during part from State funds. The Commission held that these hunters were not "civil employees" of the Federal Government, as their whole salary was being paid out of State funds at the time of their injury, and therefore that they were not entitled to compensation under the Act. In submitting the cases to the Commission, the Biological Survey called attention to a previous decision in which an employee in another Department was granted compensation in connection with injuries sustained in California, he having been employed on a cooperative basis whereby the Federal Government paid part of his salary and the State part. The distinction between the two cases apparently lies in the fact that the California employee was carried continuously on the rolls of the Department under which he was employed, although only part of his salary was paid from Federal appropriations, whereas in the case in point the Colorado hunters were being paid exclusively from State appropriations at the





time of injury, although during part of the year they were on the Federal rolls. The rule appears to be well established, therefore, that in order to be entitled to compensation under the Federal Employees' Compensation Act one must be a "civil employee" of the Government at the time of the injury, and he would not be considered such unless at least part of his salary was being paid by the Federal Government at the time of injury.

The following publication of the Bureau was issued in January: S.R.A.-B.S. 45, Regulations for the Protection of Land Fur-bearing Animals in Alaska; p.1; issued January 16. Amending regulation No. 4, as noted in last month's issue.

Among manuscripts submitted in January for approval for outside publication were the following:

Bailey, Vernon, "The Flag Squirrel," for Wild Life.

Howell, Arthur H., "Diagnoses of Eight New Chipmunks of the Genus Eutamias," for Journal of Mammalogy.

Kellogg, Remington, "Are Moles Held in Check by Blacksnakes?" for Bulletin U.S. Golf Association.

Oberholser, H. C., "Keys to the Orders and Families of North American Birds," for Knowing Birds Through Stories.

Silver, James, "Destroying Rats on the Farm," for Farm Bureau News, Cornell University.

Wetmore, Alexander, "Description of a Brachyspiza from the Chaco of Argentina and Paraguay," for Proceedings Biological Society of Washington.

Wetmore, Alexander, and James L. Peters, "A New Genus and Four New Subspecies of American Birds," for Proceedings Biological Society of Washington.

#### BIOLOGICAL INVESTIGATIONS

Frederick C. Lincoln left Washington on January 27, for Iowa and other points in the West, for the purpose of banding wild ducks.

Col. Basil Hicks Dutcher, retired Army Surgeon, who died at Walter Reed Hospital on January 16, 1922, aged 50 years, served on the staff of the Biological Survey during several important expeditions, as field naturalist.

#### ECONOMIC INVESTIGATIONS

Mr. Frank G. Ashbrook reports a very interesting and successful meeting of the American Fox Breeders' Association, at Boston on January 18. Dr. Bell and Dr. Hanson were unable to attend the meeting as originally planned.

Reports from J. S. Iigon who is cooperating with the State Department of Conservation in organizing predatory animal work in Michigan indicate that important progress is being made in establishing field operations on a sound basis, and that despite some misunderstandings and opposition which arose from bounty adherents, the work is receiving the active support of responsible and well-informed citizens and is constantly gaining ground as the objects and plan of the work become better understood. The State is publishing a monthly news letter giving plans and results of cooperative effort between the State Department of Conservation and the Biological Survey.



Reports received from all points in the field where poisoning operations against coyotes are in progress indicate that operations this year are more extensive and the results being obtained more satisfactory than in any previous year. The work is proving exceedingly popular among the stockmen. The success is clearly due to the improved poisoning methods and the more thorough planning and organization of the campaigns.

During the winter months many strikingly effective poisoning and shooting drives for the destruction of jack rabbits have been carried out. Results thus far reported indicate that this will prove to be a banner year in jack-rabbit control work.

It is gratifying to note the progress which A. E. Gray, in charge of rodent control work in Texas, is making in arousing interest in systematic efforts to combat prairie dogs. Operations were started in a small way in the State several years ago, but it remained for Mr. Gray to put the work on a well organized basis. Prospects are good for the orderly development of the rodent control work in that State along lines similar to those which have given such valuable returns in the States where it has been in progress continuously for several years.

The Bureau has arranged with the Bureau of Animal Industry for a thorough cooperative study of virus products which have been extensively advertised for use in destroying rats and mice. This work is now in progress and plans have been made for a more thorough and comprehensive study of the effect of viruses upon such rodents. The problem is the increase and maintenance of virulence in such products and the determination of the extent to which such products may endanger human beings and domestic animals.

In summarizing data regarding rodent eradication work the interesting fact was developed that cooperators expended \$1,676,694 during the past two fiscal years, there being a difference of less than \$4,000 between expenditures thus made during these two years.

#### FOOD HABITS RESEARCH

W. F. Kubichek returned on February 6 after a successful trip investigating reported damage by sea fowl to scallop beds at Nantucket and Marthas Vinyard, and on Cape Cod. Great numbers of eider ducks were found dead from coming in contact with oil floating on the waters along the coast, discharged from sea-going vessels. He reports seeing a remarkably low percentage of female eider ducks either living or dead, as it appears they are killed by hunters in confusing them with other ducks, although the species is protected throughout the year.

#### GAME AND BIRD RESERVATIONS

Maj. H. F. Stone, In Charge, Game and Bird Reservations, returned on February 7 after a month's official trip in Florida. Among the bird reservations visited were Indian Key and Passage Key of the Tampa Bay Group, Tortugas Keys, and Pelican Island, about which he reports as follows: Indian Key was not seriously injured by the hurricane in October, the damage being principally confined to the tops of the mangroves on Bird Key. Passage Key, which was almost entirely swept away during the hurricane, has since then partially built up into two lumps instead of one, the southerly one being the higher and out of water at high tide; the area





is now almost as great as it was a year ago. A third lump has formed about three-fourths of a mile northwest and a bar is forming between it and the original island. Most of the damage done in October was due to high water rather than high wind.

The warden's quarters at Tortugas Keys were completely undermined and many of the piles eaten away. In order to protect it, it will be necessary to move the building one hundred or two hundred yards. The Key itself is now fairly well covered with low vegetation, such as wild lavender, salt water mustard, etc. These plants will afford considerable shade for the young birds during the nesting season but will not afford roosting and nesting places for the old ones. Efforts will be made to reestablish bay cedars and to introduce lilies and other plants. At Pelican Island, several hundred young pelicans have died and only a few of the old birds are now there. It has not been determined yet whether the young birds died on account of the desertion of the old ones or whether the old birds left on account of the death of the young. About 200 skimmers are there at present. Five wooden signs of a new design have been erected on the reservation.

The feeding of hay to the elk at the Elk Refuge, Wyoming, began on January 4, and the latest report from Warden D. C. Nowlin states that 4,350 elk were on the feeding grounds. The total number of calves is given as 1,063, which is about 24 per cent of the total and is considered to be an unusual number. The increased number of elk on the feeding grounds over the total fed last year is attributed to the large calf crop and the small number killed during the last shooting season. The bulk of the elk are in good condition but the orphaned calves and cripples are dying. Thus far, the winter has been a severe one at the Refuge. There have been 15 inches of snow with ice underneath, and the weather has been extremely cold.

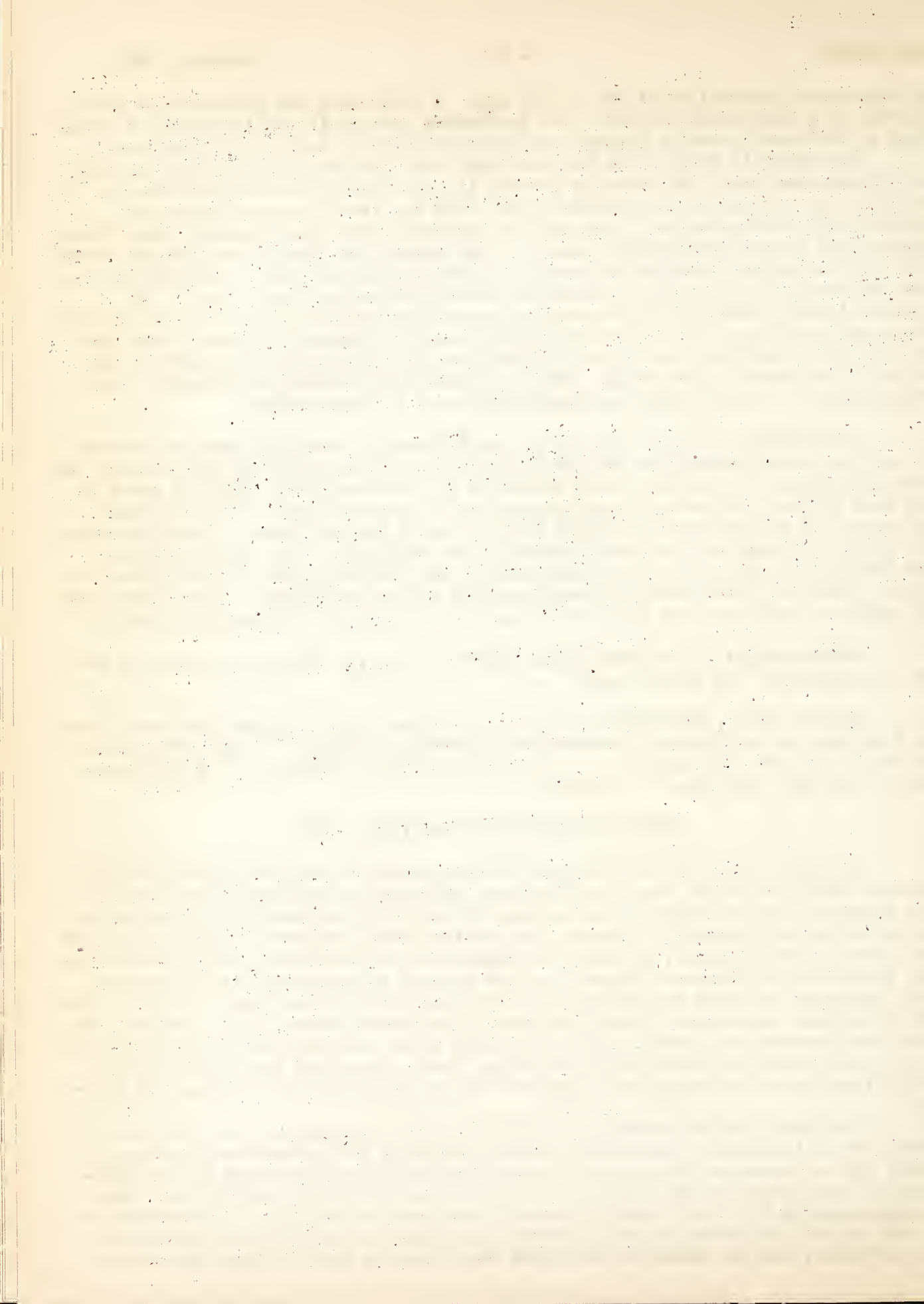
Warden Hodges of the Bison Range reports the worst winter for cold and snow in the history of the Bison Range.

Fred M. Dille, Reservation Inspector, advises that a buffalo calf born late in June died at the Niobrara Reservation, Nebraska, recently. It was not possible to get a team into the pasture for some days afterwards because of the strenuous "wake" the herd held over the remains.

#### MIGRATORY-BIRD TREATY AND LACEY ACTS.

An order issued by the Secretary of Agriculture, effective January 24, 1922, permits employees of the Bureau of Fisheries to shoot and kill gulls and terns on the waters of the Territory of Alaska when these birds are found destroying salmon eggs, salmon, and other food fishes. An earlier order, October 24, 1919, permitted any owner, superintendent, or bona fide employee of a public or private fish hatchery in the United States or Alaska, for the purpose of protecting the fishes at such hatchery, to shoot or trap gulls, terns, and certain other species at any time on the grounds and waters of such hatchery. The present order, which does not repeal the previous one, permits gulls and terns to be killed on any waters of Alaska where these birds are found to be committing damage to salmon and other valuable food fishes, but restricts the killing of them to employees of the Bureau of Fisheries.

The order further provides that "birds killed pursuant to the permission contained in this order, and parts thereof, including the plumage and feathers, shall not be possessed, transported, or shipped in any manner except for the purpose of destruction in the immediate vicinity where the birds were killed: Provided, however, That such birds or parts thereof may be shipped or transported, as a gift but not for sale, to public museums and public scientific and educational institutions, and all packages containing such birds or parts thereof so shipped



or transported shall be plainly and clearly marked so that the name and address of the shipper and the nature of the contents may be readily ascertained on an inspection of the outside thereof."

A violator charged with the possession of wild ducks after close of the open season was arraigned in the Federal court at Galveston, Texas, on January 16, 1922, entered a plea of guilty, and paid a fine of \$100. The defendant was cautioned by the court that if again arraigned on a similar charge a jail sentence would be imposed.

Announcements have been received in the Washington office of the wedding of former Warden Charles P. S. Smith and Miss Genevieve Cecilia Kunz, of Davenport, Iowa. Mr. Smith and his bride went on their wedding trip through Louisiana and Florida. They will be at home in Chicago after March 1. Best wishes are extended.

Since Mr. Smith's resignation, U. S. Deputy Game Warden Harry A. Andersen has been rendering effective service in looking after official matters in Davenport.

Col. John Henry Wallace, Jr., for 15 years State Commissioner of Conservation of Alabama, and a member of the Advisory Board under the Migratory-Bird Treaty Act, died at his home near Montgomery on January 17. Death was the result of pneumonia, contracted while on a hunting trip in Louisiana. Mr. Wallace was well known throughout the country as one of the foremost conservationists, and as a member of the Advisory Board he was most helpful with expert advice regarding proposed changes in the migratory-bird regulations. He has been one of the strongest proponents of treaties with Latin American countries for the protection of birds migrating between the United States and those countries.

The following appointments were made to the position of U. S. deputy game warden during the month of January:

Hugh H. Lewis, Jr., 1616 Hemphill St., Fort Worth, Texas.  
Harry A. Andersen, 711 Fairmont St., Davenport, Iowa.  
James M. Folck, Onawa, Iowa.  
Ludwig Bethel, 1401 Newton St., Key West, Fla.  
William T. Skaggs, Lenora, Kans.  
John G. Keeler, Bagley, Wis.  
Arthur J. Fisher, Box 417, Las Vegas, Nev.  
John J. Smith, Moultrieville, S. C.  
Bruno H. Vollmer, 403 North "M" St., Bryan, Ohio.  
Irl G. Brown, Decatur, Ala.

The Bureau learned with regret of the death of Deputy Warden Elmer R. Potter of Fayetteville, Ark., which occurred on January 6.

Appointments of the following U. S. deputy game wardens were terminated during the month of January:

Fred W. Clarke, 1207 Ontario St., Cleveland, Ohio.  
John R. Srofe, General Delivery, Georgetown, Ohio.  
Elmer R. Potter, Fayetteville, Ark.  
John Hinson, Snow Lake, Ark.





## Cases Terminated - Reports received during January.

| <u>Warden</u>                | <u>Cases</u> | <u>State</u>     | <u>Violation</u>  | <u>Fine</u>                    |
|------------------------------|--------------|------------------|---|--------------------------------|
| Asmuth                       | 3            | Iowa             | Hunting ducks in close season   | \$10 and costs of \$14.55 each |
| Asmuth and Raeth*            | 2            | Wisconsin        | Killing ducks in close season   | \$100 each                     |
| Barmeier                     | 1            | Illinois         | Hunting ducks from motorboat  | \$25 and costs of \$11.65      |
| Barmeier                     | 1            | Illinois         | Shipping ducks for sale and in package not properly marked, and under fictitious name | \$250 and 90 days in jail      |
| Birsch                       | 1            | Virginia         | Killing geese in close season   | \$25                           |
| Bloxsum                      | 1            | Maryland         | Killing sandpipers  | \$10 and costs                 |
| Charlton and Pfarr*          | 1            | Ohio             | Killing a grebe   | \$35 and costs of \$11.75      |
| Charlton and Pfarr*          | 1            | Ohio             | Killing a wood duck   | \$35 and costs of \$11.75      |
| Charlton, Stuber* and Pfarr* | 1            | Ohio             | Killing a blue heron  | \$5 and costs                  |
| Hoffman                      | 1            | Alabama          | Killing a gull  | \$2.50                         |
| Hoffman                      | 10           | Alabama          | Killing doves in close season   | \$10 each                      |
| Hoffman                      | 1            | Alabama          | Hunting ducks after sunset  | \$25                           |
| Hoffman                      | 1            | Louisiana        | Purchasing ducks  | \$5                            |
| Hoffman                      | 1            | Louisiana        | Purchasing ducks  | \$25                           |
| Hoffman                      | 5            | Louisiana        | Selling ducks   | \$25 each                      |
| Kelsey                       | 1            | So. Dakota       | Hunting ducks after sunset  | \$50                           |
| Kelsey                       | 1            | So. Dakota       | Hunting ducks after sunset  | \$1                            |
| Kelsey and Johnson*          | 1            | So. Dakota       | Hunting ducks after sunset  | \$25                           |
| Linebaugh                    | 7            | Tennessee        | Hunting doves in close season   | \$10 each                      |
| Perry                        | 16           | Tennessee        | Killing doves in close season   | \$10 each                      |
| Perry                        | 4            | Missis-<br>sippi | Killing wood ducks  | \$10 and costs each            |
| Shaver                       | 1            | Illinois         | Killing ducks in close season   | \$25 and costs                 |
| Shaver                       | 6            | Minnesota        | Hunting ducks after sunset  | \$10 each                      |
| Shupee                       | 1            | Texas            | Possessing ducks in close season  | \$100                          |
| Steele                       | 2            | Washington       | Hunting ducks after sunset  | \$20 each                      |
| Steele                       | 1            | Washington       | Possessing snipe in storage during close season                                       | \$50                           |
| Tonkin                       | 1            | Oregon           | Killing martins   | \$5                            |
| Visart and Riddick*          | 2            | Arkansas         | Purchasing ducks  | \$10 and costs each            |
| Visart and Riddick*          | 1            | Arkansas         | Selling ducks   | \$10 and costs                 |

\* U. S. Deputy Game Warden



## Cases Reported to Solicitor for Prosecution

| <u>Warden</u>                   | <u>Cases</u> | <u>State</u>   | <u>Violation</u>   |
|---------------------------------|--------------|----------------|--|
| Asmuth                          | 1            | Wisconsin      | Hunting ducks after sunset                                 |
| Barmeier                        | 1            | Illinois       | Shipping ducks for sale and in package not properly marked |
| Barmeier                        | 1            | Illinois       | Hunting ducks from a motorboat                             |
| Barmeier                        | 2            | Illinois       | Killing geese from a motorboat                             |
| Bergquist*                      |              |                |  |
| and Vanselow*                   | 2            | Illinois       | Killing loons  |
| Birsch                          | 1            | Maryland       | Selling ducks  |
| Bloxson                         | 4            | Virginia       | Trapping ducks   |
| Charlton and<br>Lacourse**      | 2            | Kentucky       | Hunting ducks from a motorboat                             |
| Charlton and<br>Stuber*         | 1            | Ohio           | Selling ducks  |
| Charlton, Stuber*<br>and Pfarr* | 1            | Ohio           | Killing a blue heron                                       |
| Collins, Wm. T.*                | 1            | Maryland       | Selling ducks  |
| Denmead and<br>Moody Creighton* | 1            | Maryland       | Killing ducks from a motorboat                             |
| Farnham                         | 2            | Pennsylvania   | Killing wood ducks   |
| Farnham                         | 1            | Pennsylvania   | Killing a night heron                                      |
| Farnham and<br>Smith, B.E.      | 2            | South Carolina | Hunting ducks after sunset                                 |
| Hoffman                         | 10           | Alabama        | Killing doves in close season                              |
| Hoffman                         | 1            | Alabama        | Killing a gull   |
| Kelsey and<br>B.H.Johnson***    | 3            | South Dakota   | Hunting ducks from a motorboat                             |
| Linebaugh                       | 2            | Tennessee      | Selling geese  |
| Merrill and<br>Lindgren*        | 2            | Illinois       | Selling ducks  |
| Merrill and<br>C.D.F.Merrill*   | 2            | Illinois       | Selling ducks  |
| Pacetti                         | 3            | Florida        | Hunting ducks from a motorboat                             |
| Ransom                          | 1            | Idaho          | Hunting ducks after sunset                                 |
| Shaver                          | 1            | Minnesota      | Offering to sell ducks                                     |
| Shaver and<br>Bridges*          | 4            | Minnesota      | Hunting ducks after sunset                                 |
| Shupee                          | 1            | Texas          | Wounding a little brown crane                              |
| Shupee                          | 1            | Texas          | Killing a flicker  |
| Smith, C.P.S.                   | 1            | Iowa           | Killing a goose in close season                            |
| Smith, C.P.S.                   | 2            | Iowa           | Capturing ducks in close season                            |
| Stadlmeir                       | 3            | Massachusetts  | Hunting shorebirds after sunset                            |
| Tieken, Chas.H.*                | 2            | Iowa           | Hunting ducks after sunset                                 |
| Vanselow*                       | 1            | Illinois       | Hunting in the close season                                |
| Visart and<br>O.K.Delman**      | 1            | Oklahoma       | Killing snipe in close season                              |

\*U.S. Deputy Game Warden

\*\*State deputy game warden

\*\*\*Cooperator





## ALASKA INVESTIGATIONS

W. F. Bancroft went to New York City early in January to attend to the transferring of Alaska furs from one fur auction company to another, for the February 6th sale.

Olaus J. Murie, assistant biologist, stationed at Fairbanks, has wired the Bureau of his departure over the railroad for Broad Pass, from which place he will travel overland to McGrath in the Kuskokwim region, to study the caribou situation.

Many inquiries from residents of the States are constantly being received regarding the fur-farming and the reindeer industry in Alaska.

Reservation and Fur Warden Donald H. Stevenson advises that he is now located at False Pass, Unimak Island, in the Aleutian Chain, and will remain there practically the remainder of the winter. He contemplates making a snow-shoe trip around the entire island if possible, in order to study animal life and general conditions on the island. During the summer and fall he made a reconnaissance of many islands on the schooner "Thekla," owned by the Atka Native Store, in company with Bureau of Education employees, reaching the westernmost island of the Aleutian Chain, Attu Island, but being unable to reach Rat Island because of incessant head winds.

The Secretary on February 16 approved an amendment to the regulations for the protection of land fur-bearing animals in Alaska under which shooting is now permitted throughout the Territory. Heretofore it has been unlawful to shoot fur bearers in Alaska except on the Aleutian Islands Reservation and on the Alaska Peninsula east to Becharof Lake. Conditions in various parts of Alaska were such that the prohibition of shooting was working a hardship upon the natives, who depend upon the taking of furs for so much of their livelihood and had been accustomed to shoot certain fur animals and were not equipped for trapping them. The new amendment also prohibits the destruction of beaver houses and runways by the use of dynamite or in any other manner.

Elmer T. Forsling, of Kimball, Nebraska, has been appointed field assistant in reindeer investigation work in Alaska, reaching Washington on the 16th for instructions. He leaves about the 22d for Seattle, where he will take a boat for Seward, and go thence by rail over the new railroad to Nenana. From Nenana travel will be by dog team to the reindeer experiment station at Unalakleet.

L. J. Palmer, in charge reindeer grazing investigations, who has been in Washington since last September preparing a report on the work, will leave on the 19th for Rockford, Ill., his home, where he will spend a few days and then proceed to Seattle to board a boat for Alaska, Mr. Forsling accompanying him.





# THE SURVEY

Monthly House-Organ of the Bureau of Biological Survey  
United States Department of Agriculture

Vol. 3

Washington, D. C., March 15, 1922

No. 3

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance to Bureau workers, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended for employees of the Bureau, supplementary to the Departmental house-organ, The Official Record.

## GENERAL NOTES

In the Agricultural appropriation bill (H. R. 10730) for the fiscal year 1923, which passed the House on March 14, the amount authorized for the Biological Survey is \$872,565. This is \$49,240 more than last year and \$3,630 less than the estimates. The amount reported from the Committee on Appropriations was \$52,740 less than this, and the increase was made on the floor of the House. The bill has not yet been considered by the Senate.

During the month of February Survey workers sent in to the Bureau 394 press clippings, an average of 17 for each working day of the month. The distribution of these to divisions interested was as follows: Migratory Bird Treaty Act, 143; Economic Investigations, 141; Biological Investigations, 38 (28 birds, 10 mammals); Game and Bird Reservations, 16; Food Habits Research, 8; Alaska Investigations, 4; to the Secretary's office for other bureaus of the Department, 44. A call for cooperation in sending in press clippings was the subject of an article in The Official Record for January 25 (which is particularly commended to all workers of the Bureau) and was the direct cause of the compilation of the above figures. If any workers are overlooking the value of these clippings to the Department, it is trusted that this may serve as a reminder. Small slips to use in sending in clippings will be supplied on request (Form Bi-599).

The Secretary's appeal to Field Workers, printed on the first page of The Official Record for March 1, deserves careful notice. Whenever material that seems of more than local interest comes to the attention of field workers, it will be appreciated if they will write it up and send it in through the regular channels to the Chief of the Division in which they serve, so that it may be handled promptly either for the public press, The Official Record, or THE SURVEY. Neither of the last two mediums can be considered house-organs in the best sense of the word unless they have the cooperation of the workers for whom intended.

Gov. Scott C. Bone, of Alaska, had a long conference with Dr. Nelson on March 9, in connection with various phases of the work being done by the Biological Survey in the Territory.



The following publication of the Biological Survey was issued in February: S. R. A. - B. S. 46, A further amendment of Regulation 4, of the Regulations for the Protection of Land Fur-Bearing Animals in Alaska; p. 1, issued February 28 (received March 2).

The only manuscript submitted in February for outside publication was a paper entitled, "Some Notes Concerning the Breeding Habits of *Thomomys townsendi*, observed near Vale, Montgomery County, Oregon," by Everett E. Horn; for the Journal of Mammalogy.

Elmer W. Erickson was appointed stenographer to the Chief of Bureau on February 24, 1922, vice Norris A. Olmstead, who returned to the Bureau of Animal Industry, where he had served prior to his transfer to the Biological Survey on May 16 of last year.

### BIOLOGICAL INVESTIGATIONS

Arthur H. Howell is on field work in eastern Missouri, where he is studying conditions affecting migratory ducks and other waterfowl.

E. A. Goldman, who is studying the condition of large game mammals in Wyoming, reports severe winter weather in the region, in spite of which, however, he is making successful headway in his work. He will soon leave Wyoming to investigate the Wichita Game Preserve in Oklahoma.

At the regular meeting of February 4, A. H. Howell addressed the Biological Society of Washington upon the subject, "The Relationship and Distribution of American Chipmunks." His talk was an illustrated resume of the results of his research work. On March 4, Vernon Bailey gave an illustrated talk before the Society on "Raising Baby Beavers." He described his experiences with two young beavers which he kept for about ten weeks last summer.

F. C. Lincoln left Washington on February 27 to establish bird-banding stations for waterfowl at several of the hunting clubs along the Illinois River. Several members of these clubs have offered the Bureau the use of the grounds and have promised assistance in carrying on the work of trapping. Mr. Lincoln's first station was at the Sanganois Club, near Browning, Ill.

### ECONOMIC INVESTIGATIONS

Project agreements providing for cooperation in predatory animal and rodent work between the State Department of Agriculture of California and the Bureau have been approved by these two organizations and have been submitted to the Secretary of Agriculture for final approval. Cooperative work along these two lines has been in progress for some time under informal agreements. The completion of the project agreements establishes the work on a clearly defined and sound business basis.

Rabies among coyotes, which appeared in epidemic form in Grant County, Washington, last August, has spread until five counties are now involved. The situation has become so serious that the Bureau has received many appeals from stockmen, business organizations, State officials, and Congressmen urging that





additional funds be made available to prevent the spread of the disease and to stamp it out. Dr. G. R. Bach has been waging a vigorous campaign against the disease, having concentrated practically his entire force of Federal and State hunters in the localities affected. He has received the active cooperation and support of the State Department of Agriculture and other State and county organizations.

In response to an urgent call from officials of the National Fox Breeders' Association of America, Dr. Karl B. Hanson has been sent to Muskegon, Mich., to assist in determining the nature of a disease that has appeared among silver foxes on a ranch in that locality and to advise regarding its treatment and measures for its control.

J. Stokley Ligon was invited to present a paper on the control of predatory animals in the Great Lakes Region at a meeting of the Tri State Development Congress, at Milwaukee, Wis., March 3. This step was taken in recognition of the work which has already been accomplished in organizing effective operations against wolves and coyotes in Michigan and of the need for an extension of the work and its proper correlation to include portions of Minnesota and Wisconsin, where predatory animals are proving destructive of live stock and game.

Stanley P. Young, of Denver, Colo., reports the arrival of a little daughter at his home on February 9.

Dr. W. B. Bell addressed the men of the Rehabilitation Division of the College of Agriculture, University of Delaware, on March 8, relative to the service which the Bureau is rendering in the interest of agriculture and stock raising.

James Silver left Washington on February 19 to confer with Extension Service officials in North Carolina, South Carolina, and Georgia and to conduct demonstrations in a number of counties in Florida, arrangements for which were made by the Director of Extension and the county agents.

On invitation of the President of the New Mexico Cattle and Horse Growers Association that the Bureau be represented at the meeting of this organization at Las Vegas, N. Mex., March 20-21, S. E. Piper and Chas. F. Bliss have been detailed for this purpose.

Frank G. Ashbrook continued his study of fox ranches in the State of New York during the early part of February and also attended the fur sale held by the New York Auction Company, February 6-11. The general trend of prices at this sale was upward, indicating that the fur business, which was considerably disturbed by the speculative activities which prevailed during and immediately following the World War, is again becoming stabilized and that conditions are improving.

In last month's SURVEY it was stated that Dr. Karl B. Hanson was unable to attend the meeting of the American Fox Breeders' Association at Boston. Later information developed the fact that Dr. Hanson succeeded in reaching Boston in time to attend the meeting.





Miss Mabel C. Alexander was transferred from the Migratory Bird Division to this Division to take the place made vacant by the transfer of Miss Pauline Baird to the Grain Futures Trading Act Administration, Office of the Secretary.

#### FOOD HABITS RESEARCH

E. R. Kalmbach has returned from the Imperial Valley, California, where he has been conducting experiments in the control of blackbirds. While there was no difficulty in developing baits acceptable to the birds, so many other obstacles were encountered that it was decided that poisoning, under the conditions prevalent in the Imperial Valley, is not an efficient and economical means of control. Chief among these conditions are an abundance of available food throughout the winter, the natural wandering habits of the birds, and, to a certain degree, their fear of a poisoned area when once a killing has been made. Although the work was confined entirely to experiments, and no attempt was made to conduct operations on a large scale, over 13,000 blackbirds are estimated to have been killed.

#### GAME AND BIRD RESERVATIONS

Twelve mountain sheep (4 bucks and 8 ewes), presented to the Biological Survey by the Canadian National Parks Service, were received at the Montana National Bison Range on February 13. The sheep were brought to the range from Rocky Mountains Park, Banff, Alberta, by Warden A. R. Hodges, of the Bison Range, without accident and in very good condition.

The loss of antelope at the Bison Range from being run down and killed by Indian dogs and coyotes in the deep snow drifts has been heavy. The great amount of snow on the preserve and the extremely cold weather has made it impossible for the warden to make a thorough investigation to determine the number of antelope killed. More snow is said to be on the ground in the vicinity of the Bison Range than at any time during the past 25 years.

The loss of at least three antelope and one bison bull has been reported by Warden Chambers, of the Wind Cave Game Preserve, South Dakota, as a result of the extreme weather conditions.

Warden Riddick, of the Big Lake Reservation, Arkansas, reports more ducks on the refuge than he has seen there at this season of the year since he took charge in 1918, especially is this the case with canvas-backs, mallards, and pintails.

At the request of the Secretary, the President issued an Executive order on February 27, 1922, revoking an order which 13 years ago set aside approximately 8,000,000 acres as the Yukon Delta Bird Reservation, Alaska. The action was taken at the instance of the Biological Survey for the reason that so far as white settlers are concerned the region is remote and of too marshy a character to be desirable for settlement and this fact protects the birds to a great extent although many are taken annually by the resident Eskimos for food purposes. It has been found necessary to permit these natives to take birds and

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eggs on the reservation as they have always been obliged to rely upon them as one of the major elements in their food supply.

An Executive order issued on December 22, 1921, created bird refuges on the lands of three of the Federal big-game preserves - the National Bison Range, Montana; the Sullys Hill Game Preserve, North Dakota; and the Elk Refuge, Wyoming. There are now 69 reservations under the control of the Biological Survey; five of these are primarily big-game preserves but birds also are now protected on all of them.

#### MIGRATORY BIRD TREATY AND LACEY ACTS

G. A. Lawyer left Washington on February 5 for an extended official trip which will include points in the Middle West, Northwest, and Pacific Coast States. He will return via the southern route. He will interview and confer with members of the field force, State game officials, sportsmen, and others interested in the enforcement of the Migratory Bird Treaty Act.

Reports of the destruction of thousands of game birds every season by oil and oil waste at a round-house sump of the Northern Pacific System at Las Vegas, Nev., led to a presentation of the matter to the Company by the Biological Survey. As a result, the Bureau has been advised that the condition will be remedied by the installation of an oil-recovery plant at a cost of \$1,800, which will not only eliminate the menace to wild fowl but utilize materials that have been allowed to go to waste. It is hoped that the example set by the Company will be followed in other parts where wild life is threatened by needless pollution of waters.

Major Stone, in charge of Game and Bird Reservations, visited Norfolk, Va., March 7 and 8 for the purpose of looking over some small motor boats to be disposed of by the Navy Department, to learn whether any are likely to prove suitable for the migratory-bird patrol work of this Bureau.

Conrad F. Asmuth resigned from the position of U. S. Game Warden, effective March 4.

The Bureau learned with regret of the death of Deputy Warden Jacob Peters, of Verdel, Nebr., which occurred on November 17, 1921.

The following appointments were made to the position of U. S. Deputy Game Warden during the month of February :

Charles Williams, 717 North "B" St., Arkansas City, Kans.

John T. Capps, Back Bay, Va.

L. J. Brown, R. D. No. 3, Montgomery, Ala.

Geo. H. Chaffee, Middlebury, Vt.

Gustave East, Green Spring Ave., Mt. Washington, Md.

Ernest R. Nordin, 2903 - 28th Ave., So. Minneapolis, Minn.

Siguard G. Swanson, Creston, Iowa.

August Greiner, Elairsburg, Iowa.

William B. Shoemaker, Arnolds Park, Iowa.





Norman A. Miller, Box 20, Navy Yard, Charleston, S. C.  
 Robert H. Phillips, Box 183, Winnsboro, S. C.  
 Gordon A. Guthrie, Miller, Ohio.

Appointments of the following U. S. Deputy Game Wardens were terminated during the month of February:

Cyrus N. Joyce, Arnold, Md.  
 Thomas L. Lechliden, Silver Springs, Md.  
 William Curry, 40 Madison St., Annapolis, Md.  
 Fred O. Hutchinson, (former address) 55 North Euclid Ave.,  
 Pasadena, Calif.

Cases Terminated - Reports received during February.

| <u>Warden</u>           | <u>Cases</u> | <u>State</u>       | <u>Violation</u>                           | <u>Fine</u>   |
|-------------------------|--------------|--------------------|--|---|
| Bloxsom                 | 4            | Virginia           | Trapping ducks                             | \$25 each and<br><u>5 days each</u><br><u>in jail</u> |
| Bloxsom                 | 1            | Maryland           | Killing sandpipers                         | \$5   |
| Bragdon*                | 1            | Alabama            | Killing insectivorous birds                | \$2.50  |
| Bragdon*                | 1            | Alabama            | Killing meadowlark                         | \$1.00  |
| MacGary*                | 1            | Indiana            | Killing ducks in close season              | \$1 and costs   |
| Maddox**                | 1            | Maryland           | Hunting ducks in close season              | \$15 and costs  |
| Ransom                  | 1            | Washington         | Killing grebe                              | \$5   |
| Shaver                  | 1            | Wisconsin          | Selling ducks                              | \$15  |
| Shaver                  | 7            | Minnesota          | Hunting ducks after sunset                 | \$10 each   |
| Stadlmeir<br>and Peck** | 1            | Massachu-<br>setts | Killing dowitcher                          | \$5   |
| Visart                  | 1            | Arkansas           | Hunting ducks after sunset                 | \$5 and costs<br>of \$11.40                           |
| Visart                  | 1            | Arkansas           | Selling ducks                              | \$10 and costs<br>of \$11.40                          |
| Visart                  | 1            | Arkansas           | Possessing ducks without Federal<br>permit | \$10 and costs<br>of \$11.40                          |
| Whitehead               | 1            | Florida            | Hunting ducks in close season              | \$10  |
| Whitehead               | 1            | Florida            | Hunting ducks from motorboat               | \$10  |
| Whitehead               | 1            | Florida            | Killing great blue heron                   | Costs and <u>six</u><br><u>days in jail</u>           |

Cases reported to Solicitor for prosecution.

|          |   |           |   |
|----------|---|-----------|---|
| Asmuth   | 1 | Wisconsin | Selling ducks                                   |
| Asmuth   | 1 | Wisconsin | Purchasing ducks                                |
| Barmeier | 3 | Missouri  | Possessing ducks in storage during close season |
| Barmeier | 1 | Missouri  | Possessing a heron                              |
| Barmeier | 1 | Missouri  | Hunting waterfowl from motorboat                |

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden



| <u>Warden</u>  | <u>Cases</u> | <u>State</u> | <u>Violation</u>                        |
|----------------|--------------|--------------|---|
| Barmeier       | 1            | Missouri     | Selling ducks                           |
| Barmeier       | 3            | Missouri     | Hunting coot from motorboat             |
| Barmeier       | 4            | Illinois     | Hunting coot from motorboat             |
| Barmeier       | 1            | Illinois     | Killing gull                            |
| Bloxsom        | 2            | Virginia     | Hunting curlew                          |
| Bloxsom        | 1            | Virginia     | Selling ducks                           |
| and Jones**    |              |              |   |
| Bragdon*       | 2            | Alabama      | Killing insectivorous birds             |
| Carpenter*     | 1            | California   | Hunting ducks after sunset              |
| and Brittan*   |              |              |   |
| Creighton*     | 3            | Maryland     | Hunting ducks from motorboat            |
| Dean*          | 1            | Idaho        | Killing ducks after sunset              |
| Farnham and    | 2            | Maryland     | Hunting ducks from sailboat             |
| Fast*          |              |              |   |
| Farnham and    | 1            | Maryland     | Hunting ducks during close season with  |
| Fast*          |              |              | gun larger than 10 bore                 |
| Farnham and    | 1            | Maryland     | Hunting ducks from sailboat and offer-  |
| Fast*          |              |              | ing to sell them                        |
| Farnham, Fast* | 1            | Maryland     | Attempting to kill ducks after sunset   |
| and Tyler**    |              |              |   |
| Farnham and    | 1            | Maryland     | Killing duck from motorboat             |
| Tyler**        |              |              |   |
| Holmes         | 1            | Iowa         | Killing and shipping swan               |
| Kelsey and     | 1            | So. Dakota   | Possessing dead body of swan            |
| Johnson*       |              |              |   |
| Linebaugh      | 1            | Kentucky     | Killing great blue heron                |
| Linebaugh      | 6            | Kentucky     | Hunting doves during close season       |
| Merrill        | 8            | Illinois     | Possessing ducks in storage during      |
|                |              |              | close season                            |
| Merrill        | 1            | Illinois     | Killing ducks in close season           |
| Merrill and    | 1            | Illinois     | Possessing ducks in storage during      |
| Drake**        |              |              | close season                            |
| Merrill and    | 1            | Illinois     | Possessing ducks in storage during      |
| Fisher**       |              |              | close season                            |
| Merrill and    | 1            | Illinois     | Possessing ducks in storage during      |
| Lindgren*      |              |              | close season                            |
| Pacetti        | 1            | Florida      | Offering to sell ducks                  |
| Pacetti        | 2            | Florida      | Killing ducks from motorboat            |
| Pierce*        | 7            | New Jersey   | Hunting ducks after sunset              |
| Ransom         | 1            | Montana      | Hunting ducks after sunset              |
| Ransom         | 1            | Idaho        | Hunting ducks after sunset              |
| Ransom and     | 2            | Washington   | Possessing ducks in storage during      |
| Mushbach       |              |              | close season                            |
| Shaver         | 5            | Minnesota    | Hunting ducks after sunset              |
| Shaver and     | 1            | Minnesota    | Hunting ducks after sunset and possess- |
| Bridges***     |              |              | ing parts of gull                       |

\* U. S. Deputy Game Warden

\*\* Deputy State Game Warden

\*\*\* Cooperator



| <u>Warden</u>   | <u>Cases</u> | <u>State</u>  | <u>Violation</u>                        |
|-----------------|--------------|---------------|---|
| Shupee          | 4            | Texas         | Hunting ducks after sunset              |
| Shupee          | 1            | Texas         | Killing meadowlark                      |
| Shupee          | 1            | Texas         | Killing king rail                       |
| Shupee          | 1            | Texas         | Possessing great blue heron             |
| Shupee          | 3            | Texas         | Killing bitterns and rails              |
| Stadlmeir       |              |               |   |
| and Steele**    | 3            | Massachusetts | Hunting ducks after sunset              |
| Stadlmeir,      | 2            | Rhode Island  | Hunting ducks after sunset              |
| Wallace** and   |              |               |   |
| Medbery         |              |               |   |
| Steele          | 4            | Washington    | Hunting ducks after sunset              |
| Steele and      | 1            | Washington    | Hunting ducks after sunset              |
| Rasor**         |              |               |   |
| Steele, Munks** | 1            | Washington    | Hunting ducks after sunset              |
| and Curtis**    |              |               |   |
| Visart          | 3            | Arkansas      | Hunting ducks after sunset              |
| Visart          | 2            | Arkansas      | Selling ducks                           |
| Visart          | 1            | Arkansas      | Possessing geese without Federal permit |
| Whitehead       | 2            | So. Carolina  | Hunting ducks in close season           |

\*\* Deputy State Game Warden

#### IMPORTATION OF FOREIGN BIRDS

During the latter part of February considerable activity was manifested in the importation of quail from northeastern Mexico. The birds were entered at the ports of Eagle Pass, Laredo, and Brownsville, Texas, and were intended for distribution in Maryland, Pennsylvania, and Kentucky. On February 23, quail disease appeared in a consignment of 500 birds entered at Laredo. These birds have been placed in quarantine. Examination of all birds entered at the ports on the Texas border is made by inspectors of the Bureau of Animal Industry.

#### ALASKA INVESTIGATIONS

A new 30-horse power gas engine has been purchased for the Bureau's boat "Regal," stationed at Juneau. As soon as it is installed an extended trip will be made by E. P. Walker, who represents the Biological Survey, and the District Forester along the southern coast of Alaska as far west as Unalaska, for the purpose of making a reconnaissance of fox-farming islands.

A telegram received from O. J. Murie states that he has reached McGrath. He is making a survey of the country inhabited by caribou. He will return to Fairbanks by way of Lake Minchumina, reaching headquarters the latter part of this month.

Since the open season was established on killing beavers and martens, November 16, 1921, there have been 2,329 beaver skins and 3,951 marten skins shipped from the Territory.





# THE SURVEY

Monthly House-Organ of the Bureau of Biological Survey  
United States Department of Agriculture

Vol. 3

Washington, D. C., April 15, 1922

No. 4

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance to Bureau workers, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended for employees of the Bureau, supplementary to the Departmental house-organ, The Official Record.

## GENERAL NOTES

The appropriation bill for the Department for the next fiscal year was reported to the Senate on April 3. The section relating to the Biological Survey has not been altered from the form passed by the House of Representatives on March 13. The total appropriation carried for the Bureau is \$370,565; for the Department the amount is \$35,803,533, an increase of \$115,300 over that authorized by the House.

Among the interesting pictures included in an exhibition of new films of the Department of Agriculture, given Wednesday evening, March 29, at the Central High School, before members of the Department, was one dealing with the work of the Biological Survey, entitled "National Bird Reservations in the Gulf." The film started with a picture of Capt. William Sprinkle, former warden of the Breton Island Reservation, piloting the reservation patrol boat, The Royal Tern, from Pass Christian to the islands forming the Breton Island Bird Reservation. Views on the reservation were of colonies of skimmers, gulls, and terns. Flights of the royal terns drew the applause of the audience. The picture was produced through cooperation between the Biological Survey and the motion picture division of the department.

Dr. Nelson attended the annual meeting as a guest of The Wilderness Club, Philadelphia, on March 25. This is an organization of sportsmen who have hunted big game in all parts of the world. At each of the annual meetings the club has a notable exhibition of wild-life pictures, and at the present meeting the finest series of moving pictures of African game ever taken were shown for the first time in America. The pictures were secured on an expedition made by the Crown Prince of Sweden. Dr. Nelson also attended a dinner on March 18 given in honor of Governor Scott C. Bone, of Alaska, and Colonel Mears, Chief Engineer of Construction of the Alaska Railroad now being completed in the interior of the Territory. The dinner was followed by short talks and a series of films showing salmon fisheries, reindeer, and other notable views of Alaska.



On March 14 eighteen ornithologists assembled at the residence of Bradshaw H. Swales, of the U. S. National Museum, and organized an ornithological association under the title of "Baird Club," in honor of Spencer Fullerton Baird. Of the number, fourteen were members of the Biological Survey. This club is wholly informal and devotes the meetings to discussions on various matters relating to birds. Dr. A. K. Fisher was elected president; Ned Hollister, Director of the National Zoological Park, vice president; and Mr. Swales, Secretary. The next meeting will be held on April 20 at Plummer Island.

The following publication of the Bureau was issued in March: Department Bulletin No. 1049, "Game as a National Resource," by T. S. Palmer, Expert in Game Conservation; pp. 48, figs. 4 (maps); March 14.

Among manuscripts submitted in March for approval for outside publication were the following:

Couch, L. K., "The Rat and the Poultryman," for the Monthly Bulletin of the Western Washington Experiment Station.

Hadwen, Seymour. "Cyst-forming Protozoa in Reindeer and Caribou, and a Sarcosporidian Parasite of the Seal (Phoca richardi)," for the Journal of American Veterinary Medical Association.

Kellogg, Remington, "Description of Two Squalodonts Recently Discovered in the Calvert Cliffs, Maryland; and Notes on the Shark-toothed Cetaceans," for the Proceedings of the United States National Museum.

Lincoln, Frederick C., "Trapping Birds for Banding Purposes," for The Auk,

McAtee, W. L., "Descriptions of Bibio (Diptera) from the Carolinas," and "District of Columbia Diptera, Bibionidae," both for the Proceedings of the Entomological Society of Washington; "A Few Additions to the Flora of the Pribilof Islands," for Torreya.

Mallach, J. R., "Panorpa Rufescens Feeding on a Cicada (Neuroptera)," and "An Unused Taxonomic Character in Syrphidae (Diptera)," for the Bulletin of the Brooklyn Entomological Society; "Seven New Species of the Syrphid Genus Sphegina meigen (Diptera)," for the Proceedings of the Biological Society of Washington; "Keys to the Syrphid Genus Sphegina meigen (Diptera)," for Entomological News.

Taylor, Walter P., Review of "The King of the Olympics," for Journal of Mammalogy.

Viereck, H. L., "Obituary, Sandor Mocsary," for Entomological News.

Walker, Ernest P., "The Red Squirrel Extending Its Range in Indiana," for the Journal of Mammalogy; "The Kittlitz Murrelet in Southeastern Alaska," for the Murrelet.





## BIOLOGICAL INVESTIGATIONS

Dr. Walter F. Taylor attended a meeting of the Committee on Conservation of Marine Life of the Pacific, of the Pacific Division of the American Association for the Advancement of Science, at the Natural History Museum, San Diego, Calif., on March 28. The Committee is working actively on definite plans for the investigation of the relations between killer whales and fur seals, also on the present status of the Guadalupe fur seal, southern sea otter, sea elephant, Heermann gull, and other animals. Concrete suggestions and recommendations will be formulated for the consideration of the National Research Council, and through the Council, of the American and other Governments concerned, regarding the renewal and extension of the fur-seal treaty of December 15, 1911. On March 31, Dr. Taylor addressed the University Club of San Diego, Calif., on "A Biological Cross-Section of Mount Ranier, Washington."

A. H. Howell returned to Washington on March 29 from the Mississippi Valley, where he has been conducting studies of migratory wildfowl with special reference to their breeding condition and dates of pairing. The period from February 12 to March 9 was spent at the hunting grounds of a ducking club near Portage des Sioux, Mo., where conditions were especially favorable for observation. The interval between March 10 and 23 was consumed in visiting a number of places in central and western Missouri. More or less extended observations were made on eleven species of ducks and three species of geese.

Mallards and black ducks were found to be pairing in numbers from February 21 on. Shovelers were seen in pairs on February 25 and March 3, and were generally paired by March 24. Practically no other species were paired to any extent up to the close of the observations on March 24. Specimens of the reproductive organs taken on various dates were preserved as evidence of the breeding condition of the birds.

Reports from all sections of Missouri indicate a decided increase in the numbers of ducks observed during the past fall and winter. The flight of blue-winged teal in September and October was the largest on record, and the spring flight of mallards and pintails unprecedented in volume.

F. C. Lincoln returned to Washington on March 25 after a successful trip in Illinois, where he was engaged in trapping and banding ducks. Operations were conducted on the grounds of the Sanganois Club, near Browning, Ill., where it was estimated that at least 50,000 mallards, pintails, and black ducks were present. The best results were secured by using a large wire-netting pen trap shaped like a waterlily leaf. Two of these were built and the total catch over a 10-day period was 460 birds. On one morning one trap held 93 birds, while others taken from smaller traps brought the day's catch up to 124. The club affords every convenience for the work and the general conditions are so nearly ideal that it is hoped more extensive operations may be carried on there during the next season.



## ECONOMIC INVESTIGATIONS.

Dr. Karl B. Hanson, of the Experimental Fur Farm, Keeseville, N. Y., has been called to Washington for a period of approximately a month to confer with Bureau officials and make special studies of parasites affecting fur-bearing animals, for which work facilities in Washington are especially favorable.

James Silver returned about the middle of March from a very successful trip in Florida and other southeastern States. Interesting studies were made of various rodents occurring in that region and demonstrations were given of effective methods for their control. Observations also were made on the abundance and destructive activities of land crabs, which have been causing very heavy losses to truck farmers, especially tomato growers.

In response to a questionnaire sent out to those engaged in fur farming in the United States, interesting and important data have been received as to the number of people engaged in raising silver foxes and other fur-bearing animals and the number of animals being reared in captivity. Results of these returns are being tabulated and will yield information of much interest. The Bureau will appreciate having its representatives in the field bring to its attention instances of new fur farms being established or items of interest regarding the rearing of fur-bearing animals in their districts.

Hunter Bob Bergier, of the Arizona District, recently captured a black wolf-dog hybrid which he reported as an especially vicious animal. The skin and skull were sent in to the Washington office and the determination was made regarding its identity.

R. Scott Zimmerman, in charge of rodent work in North Dakota, was assigned for a period of ten days during March to assist officials of the Extension Service of the Iowa State College in planning the organization of a special rat campaign which they desired to launch. Such effort is of great importance in Iowa owing to the abundance of rats and the large amounts of grain and other agricultural products produced and stored.

## FOOD HABITS RESEARCH.

Wesley F. Kubichek left the service on March 15 to engage in business in partnership with his father, at Iowa City, Iowa. While with the division Mr. Kubichek devoted most of his time to the study of the food habits of deep-water ducks, and in the case of several of these species he has brought the examination of stomachs up to date and will later prepare a report upon them for publication. In addition, last year Mr. Kubichek, in cooperation with Mr. Metcalf, made a partial survey of wild-duck foods of Minnesota lakes, and has recently investigated the relation of sea fowl to the shellfish industry of Massachusetts. It is planned to have Mr. Kubichek carry on under temporary appointment a survey of the wildfowl food resources of Montana during the coming summer.





## GAME AND BIRD RESERVATIONS.

R. E. Bateman, Predatory-animal Inspector, recently visited the Bison Range (Montana) to investigate conditions in reference to predatory animals, as a large number of antelope have been killed on the range during the winter. F. E. Splitt, a trapper, of Phillipsburg, Mont., will be sent to assist A. R. Hodges in his campaign against the coyotes and other predatory animals. Fifteen coyotes have been trapped in the vicinity of the Bison Range during the past winter, and Warden Hodges reports that he has killed also some Indian dogs that were preying upon the antelope. Mr. Hodges had distributed, up to the early part of March, 850 poison baits.

As the result of heavy losses of antelope at the Wind Cave Game Preserve, S. Dak., Louis Knowles, Predatory-animal Inspector, accompanied by Troy C. Beach, went there on March 12 to investigate the relation of bobcats and coyotes to the killing. Mr. Beach remained at the preserve to assist Warden Chambers in capturing the predatory animals, and they have succeeded in trapping 5 bobcats and 2 coyotes. One of the cats killed was one of the largest ever seen in the Black Hills country as it was larger than the average coyote and measured almost five feet from tip to tip.

E. A. Goldman, in Charge of Biological Investigations, has returned from a trip to the Wind River and Jackson Hole regions of Wyoming, where, in a cooperative undertaking with the State of Wyoming and the Forest Service, he went to make an investigation of conditions affecting elk on their winter range. The joint party in the Wind River country included the newly-appointed State Game and Fish Commissioner, Hon. Bruce Nowlin, Howard Eaton (news of whose death has recently reached the Bureau), also a State representative, and Captain Arthur M. Cook, Supervisor of the Washakie National Forest. In the Jackson Hole region Captain Cook was replaced as Forest Service representative by A. C. McCain, Supervisor of the Teton National Forest. The party reported that in spite of an unusually severe winter the elk were in most places, including the Federal and State feeding grounds at Jackson, in good condition. Information secured will be used as a basis for formulating additional plans looking to the conservation of the elk herds.

The latest report received from D. C. Nowlin, in charge of the Winter Elk Refuge, informs us that so far there is very little pasturage uncovered and only a small number of elk have left the winter feeding grounds.

We are informed by F. W. Triska, in charge of Sullys Hill Game Preserve, N. Dak., that the buffalo are still on the feeding ground, which they have not left for more than two hours during the past five months. He says that the buffalo and elk on the preserve are all in good condition.

W. M. McDaniel, an employee of the Reclamation Service, has been appointed cooperative warden at the North Platte Bird Reservation, Nebr., to supersede Albert Daily, who has left the service.





Warden Benson, of the Lake Malheur Bird Reservation, Oreg., is feeding grain to the birds at that refuge, for, because of unprecedented weather conditions, they could not obtain sufficient food to prevent starvation.

George M. Riddick, warden of the Big Lake Bird Reservation, Ark., reports that there is better observance of the fish laws there than at any time since he took charge of the reservation in 1918.

In his report for the month of March, Warden Kroegel, of the Pelican Island Bird Reservation, Fla., states that only about 150 birds are left there and apparently there will be no second nesting.

One of our correspondents writes that there are more American egrets nesting on Bird Key, Indian Key Reservation, this year than ever before, and that a collector had informed him that a colony of 24 snowy egrets nested in that locality last year and he expected a larger number to nest there this season; also that some residents of St. Petersburg, Fla., had informed him that there are more birds around Mullet Key than they ever saw before. Mullet Key is not a Federal bird reservation.

Asa N. Pillsbury, who has been warden of the Passage Key Reservation, Fla., ever since its establishment, October 10, 1905, has resigned, effective January 31, 1922.

#### MIGRATORY BIRD TREATY AND LACEY ACTS.

Geo. A. Lawyer, who is on an extended trip in connection with the administration of the Migratory-Bird Treaty and Lacey Acts and stopping at various points for the purpose of consulting Federal wardens and State game officials, is expected to arrive in Washington shortly prior to May 1.

Miss Mary O'Brien, a stenographer, was transferred from the Quartermaster General's Section of the War Department to this Division, effective March 16, to fill the vacancy caused by the transfer of Miss Mabel Alexander to the Division of Economic Investigations.

Following an assignment of five weeks in Missouri, Warden Kelsey has returned to South Dakota, his own district. Mr. Kelsey reported 7 cases while in Missouri, all involving the killing of wild ducks during the close season. Two of the violators apprehended were known market hunters, while one of the others has an unsavory reputation. Mr. Kelsey worked almost entirely in western Missouri.

Warden Barmeier has recently reported a number of cases in eastern Missouri. These include the apprehension of 3 violators near Puxico, who had in their possession 31 mallards, 2 wood ducks, and 2 mergansers. Each of the violators was placed under a \$1,000 bond.



Substantial fines were assessed during March in 3 cases secured by Warden Charlton. A violator arraigned in the Federal court at Columbus, Ohio, charged with killing wild ducks during the Federal close season paid a fine of \$100 together with costs amounting to \$12.40. A violator arraigned in the same court charged with shipping 1 otter and 8 beaver skins in violation of the Lacey Act, the otter and beaver having been illegally taken in Minnesota, was fined \$75 together with costs in the amount of \$12.40. Killing wild ducks after sunset resulted in a fine of \$50 and costs in the case of a violator arraigned in the Federal court at Detroit, Mich.

Warden Smith has secured practically all of the necessary evidence involving certain interstate shipments of rabbits illegally snared in Maine, a violation of the Lacey Act. Through the cooperation of the Maine authorities, a part of the shipments were seized.

Deputy Warden Bragdon, of Mobile, Ala., announces the arrival of a 10½ pound boy on March 25, 1922. A peculiar coincidence is the fact that Mr. Bragdon was also born on March 25. He writes that the boy will not only share his father's birthday, but also his name - Ernest Gaylord Bragdon, Jr.

The Washington office learned with regret of the death, on March 13, of U. S. Deputy Game Warden D'Arcy E. Snider, of Socorro, N. Mex.

The following appointments were made to the position of U. S. Deputy Game Warden during the month of March:

Lewis F. Eckhart, Clarks Hill, Mt. Washington, Md.  
Earl G. Kendall, 2203 N. 19th St., Omaha, Nebr.  
Archie M. Bonge, c/o State Game Warden's Office, Lincoln, Nebr.  
Leo Stuhr, Department of Agriculture, Lincoln, Nebr.  
Elmer Heintzelman, 912 Second St., Norfolk, Nebr.  
E. L. Breitenbach, R. D. No. 3, Keota, Iowa.

Appointments of the following U. S. Deputy Game Wardens were terminated during the month of March:

Thos. W. Dinwiddie, 740 Webster Ave., Chicago, Ill.  
William Henry Francke, Valentine, Nebr.  
Edmund W. Varner, Adams, Nebr.





## Migratory Bird Treaty Act Cases Terminated - Reports received during March.

| <u>Warden</u>               | <u>Cases</u> | <u>State</u> | <u>Violation</u>                                | <u>Fine</u>                    |
|-----------------------------|--------------|--------------|---|--------------------------------|
| Barmeier                    | 1            | Illinois     | Hunting coot from motorboat                     | \$25                           |
| Barmeier                    | 5            | Missouri     | Killing ducks from motorboat                    | \$25 each and costs            |
| Bloxson                     | 1            | Maryland     | Possessing bittern                              | \$5                            |
| Bloxson                     | 1            | Maryland     | Killing dowitcher                               | \$5 and costs                  |
| Bragdon*                    | 1            | Alabama      | Killing bittern                                 | \$2.50                         |
| Charlton                    | 2            | Ohio         | Hunting ducks during close season               | \$5 each and costs \$18 each   |
| Charlton                    | 1            | Ohio         | Killing ducks during close season               | \$100 and costs of \$12.40     |
| Charlton                    | 1            | Michigan     | Hunting ducks after sunset                      | \$50 and costs                 |
| Denmead                     | 1            | Virginia     | Killing ducks with gun larger than No. 10 gauge | \$25                           |
| Ehlers*                     | 1            | Indiana      | Possessing dead heron                           | \$25 and costs of \$19.32      |
| Farnham and Holland*        | 1            | New Jersey   | Hunting geese from airplane                     | \$25                           |
| Hillard, Pierce* and Hall** | 2            | New Jersey   | Hunting ducks after sunset                      | \$25 each                      |
| Holmes                      | 1            | Nebraska     | Killing ducks in close season                   | \$10                           |
| Leach*                      | 1            | Virginia     | Killing waxwings                                | \$25                           |
| MacGary*                    | 1            | Indiana      | Killing ducks in close season                   | \$1 and costs                  |
| Mushbach                    | 1            | Montana      | Hunting ducks after sunset                      | \$1 and costs of \$17.95       |
| Mushbach                    | 3            | Wyoming      | Killing coots from motor boat                   | \$5 each                       |
| Visart                      | 2            | Arkansas     | Killing ducks from motorboat                    | \$20 each and costs of \$11.40 |
| Visart                      | 1            | Arkansas     | Selling ducks                                   | \$5 and costs                  |
| Visart                      | 1            | Arkansas     | Hunting ducks from motorboat                    | \$10                           |
| Visart and Thomas*          | 1            | Arkansas     | Killing a bittern                               | \$10                           |
| Visart and Thomas*          | 2            | Arkansas     | Killing ducks in close season                   | \$10 each                      |

\* U. S. Deputy Game Warden

\*\*State Deputy Game Warden.



## Migratory Bird Treaty Act Cases Reported to Solicitor for Prosecution.

| <u>Warden</u>               | <u>Cases</u> | <u>State</u>         | <u>Violation</u>                 |
|-----------------------------|--------------|----------------------|----------------------------------|
| Barmeier                    | 1            | Missouri             | Purchasing ducks                 |
| Barmeier                    | 1            | Missouri             | Selling ducks                    |
| Barmeier                    | 2            | Missouri             | Possessing ducks in storage      |
| Birsch                      | 3            | No. Carolina         | Hunting ducks in close season    |
| Bloxson                     | 1            | Virginia             | Selling ducks                    |
| Bloxson and<br>Derrickson** | 2            | Virginia             | Hunting ducks at night           |
| Bloxson and<br>Nottingham** | 1            | Virginia             | Killing grebe                    |
| Bragdon*                    | 1            | Alabama              | Hunting coot from motorboat      |
| Charlton                    | 1            | Ohio                 | Killing ducks in close season    |
| Denmead and<br>Maitland**   | 1            | Dist. of<br>Columbia | Possessing ducks in close season |
| Kelsey                      | 7            | Missouri             | Killing ducks in close season    |
| Merrill                     | 1            | Illinois             | Possessing ducks in storage      |
| Merrill and<br>Lindgren*    | 1            | Illinois             | Possessing ducks in storage      |
| Merrill                     | 1            | Illinois             | Killing ducks in close season    |
| Mushbach                    | 4            | Montana              | Killing ducks in close season    |
| Pacetti                     | 1            | Florida              | Selling backs of egrets          |
| Pacetti                     | 2            | Florida              | Possessing ducks in storage      |
| Shupee                      | 1            | Texas                | Selling ducks                    |
| Shupee                      | 1            | Texas                | Hunting ducks from motorboat     |
| Steele and<br>Clark**       | 2            | Oregon               | Hunting ducks from motorboat     |
| Tonkin                      | 4            | Oregon               | Killing cranes                   |
| Visart and<br>Thomas*       | 1            | Arkansas             | Selling ducks                    |
| Whitehead                   | 1            | Georgia              | Possessing hermit thrush         |
| Whitehead                   | 2            | Georgia              | Possessing ducks in storage      |
| Whitehead                   | 4            | Georgia              | Killing doves in close season    |
| Whitehead                   | 1            | Georgia              | Killing robins                   |

\* U. S. Deputy Game Warden

\*\* State Deputy Game Warden



## ALASKA INVESTIGATIONS

The Bureau of Fisheries, at the request of Dr. Nelson, has agreed to sell 12 pairs of live blue foxes from the Pribilof Islands to natives of the Aleutian Island for breeding purposes; and also will sell a limited number of live blue foxes from the Pribilofs to fox farmers in Alaska to improve their stock. This will be of great assistance to fur farmers whose blue foxes were deteriorating in color.

More than 1,200 shipments of furs from Alaska have been reported to the Bureau since December 1, 1921.

Donald H. Stevenson, of the Aleutian Islands Reservation, will remain at Unimak Island until about June 1, studying bird migration and making investigations relative to animal life on the island.

Dr. Seymour Hadwen has resigned as Chief Veterinarian and Parasitologist, Alaska Reindeer Investigations, effective April 15. He will leave Washington on the 17th for Ottawa, Canada, for a week's visit with friends, and from there sail for England, where he plans to spend some time at the Moltena Institute for Research in Parasitology, at Cambridge.

Ernest P. Walker, Chief Fur Warden at Juneau, advises that he expects to have the new engine installed in the "Regal" and other improvements made on the boat in time for it to sail May 15 for a reconnaissance of islands along the southern coast of Alaska in the interests of the fur-farming industry.





# THE SURVEY

Monthly House-Organ of the Bureau of Biological Survey  
United States Department of Agriculture

Vol. 3

Washington, D. C., May 19, 1922

No. 5

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance to Bureau workers, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended for employees of the Bureau, supplementary to the Departmental house-organ, The Official Record.

## GENERAL NOTES

The Agricultural appropriation bill for the fiscal year 1923, which passed the House on March 13, and the Senate on April 10, was approved by the President on May 11. It provides for the Biological Survey an increase of funds over last year of \$47,240. The total amount for the Bureau is divided as follows: Statutory salaries, \$91,290; Game and Bird Reservations, \$44,735; Economic Investigations (including Food Habits of Birds), \$502,240; Biological Investigations, \$24,400; Migratory-Bird Treaty and Lacey Acts, \$135,640; Alaskan Reindeer and Fur-Bearing Animals, \$61,500; general administrative expenses, \$10,760; total, \$870,565.

The following publications of the Bureau were issued in April:

Farmers' Bulletin 1239, "Community Bird Refuges" (revised edition with added material covering golf courses), by W. L. McAtee, Assistant in Charge, Food Habits Research, pp. 14, figs. 3 (1 map), April 29.

Farmers' Bulletin 1247, "American Moles," by Theo. H. Scheffer, Assistant Biologist, pp. 23, figs. 16 (1 map), April 6. This bulletin supersedes Farmers' Bulletins 583 and 832.

Among manuscripts submitted in April for approval for outside publication were the following:

Bailey, Vernon, "Buffalo in Oregon," "The Combing Claws of the Beaver," "Bears Eat Cascara Berries," and "Collecting Tracks," for Journal of Mammalogy.

Howell, A. H., "Notes on the Mating of Ducks in Missouri," for Bulletin American Game Protective Association.

Jackson, H. H. T., "New Species and Subspecies of Scorex from Western America," for Journal Washington Academy of Sciences.

Malloch, J. R., "Flies of the Anthomyiid Genus Phaonia Robineau-Desvoidy (sens. lat.) Known to Occur in North America," for Proceedings U. S. National Museum; "A New Species of Forcipomyia from the Eastern United States (Diptera, Ceratopogonidae)," "Temnostoma bombylans Linne Doubtfully American (Syrphidae, Diptera)," and "A New Empid from the Eastern United States (Diptera)" for Entomological News; "Some New Genera and Species of Lonchaeidae and Sapromyzidae (Diptera)" for Proceedings Entomological Society of Washington.

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## BIOLOGICAL INVESTIGATIONS

Dr. Walter P. Taylor, who has been stationed at La Jolla, Calif., for the past two years, is now in Washington doing some museum work in connection with studies of the distribution of birds and mammals in the State of Washington.

F. C. Lincoln spoke at the Academy of Sciences, Baltimore, on May 4, before a well-attended meeting of the Maryland Audubon Society, on the bird-banding activities of the Biological Survey.

## ECONOMIC INVESTIGATIONS

Dr. W. B. Bell left Washington on April 29 for an extended inspection trip through Arkansas, Oklahoma, Texas, New Mexico, Arizona, California, Nevada, Utah, Colorado, and Kansas. He will visit the field offices, State extension departments, and other cooperating agencies to discuss work accomplished and to plan future operations in rodent and predatory-animal work.

James Silver left Washington on May 7 for a trip to Ohio, Indiana, Illinois, Michigan, and Wisconsin to investigate rodent conditions and to confer with State officials and extension directors in regard to rodent work.

The following have received temporary appointments as field assistants to aid in the spring rodent campaigns: Galen C. Oderkirk, North Dakota District; Charles F. Patterson, Wyoming-Nebraska District; Eugene B. Perkins, Idaho District; Lester A. Thompson, Colorado District.

M. M. Smith, clerk in the office at Salt Lake City, Utah, was transferred April 20 to the office at San Angelo, Tex., for duty in the Texas District.

Dr. Karl B. Hanson, who is in charge of the Government Experimental Fur Farm, Keeseville, New York, spent the month of April in Washington, studying and classifying parasites secured from foxes. This work was accomplished through cooperation with the Zoological Division of the Bureau of Animal Industry. Dr. Hanson reported that the time spent in the Washington laboratories and offices was very profitable to him and will be of great help in future work. He returned to Keeseville, May 4.

Stanley E. Piper and R. E. Bateman, of the Montana District, attended the convention of the Montana Stockgrowers' Association, at Butte, Mont., April 18 and 19. Mr. Piper gave a brief history of the work of the Bureau in the eradication of stock-destroying animals. A resolution was passed by the Association recommending that the bounty law be repealed and that the money collected under the bounty tax be spent under the direction of the Livestock Commission in cooperation with the Biological Survey.

The Arizona Legislature has passed a bill providing for \$15,000 for cooperation in rodent work and \$15,000 for cooperation in predatory animal work, to be expended in connection with the Biological Survey. This is very substantial evidence of Arizona's appreciation of the work of this Bureau.





A very interesting exhibit was presented by the Bureau at the Third Annual Sportsmen's and Tourists' Fair, at Spokane, Wash., May 2-5. Dr. Glenn R. Bach, of the Washington District, and Stanley G. Jewett, of the Oregon District, arranged an attractive and instructive display in connection with predatory-animal extermination and ably presented to visitors this phase of the work.

Den hunting has been very successful in all districts this season. C. J. Bayer reports a total of 33 wolf pups captured in Wyoming during the month of April.

S. P. Young, of the Colorado District, reports that H. A. Roberts trapped a pair of vicious wolves which had destroyed hundreds of dollars worth of live stock in the Divide country. Mr. Roberts succeeded in locating the den, capturing seven pups.

E. F. Pope, of the Oklahoma-Arkansas District, has sent in a very interesting picture of R. L. Anderson and a notorious wolf which he captured. The wolf was 6 feet 4-1/2 inches in length and weighed 86 pounds. The capture created a tremendous interest among the people of the locality as the wolf was credited with having killed many thousands of dollars worth of live stock, including full-grown cows and steers, during a period of at least six years.

Very satisfactory reports have been received from the several districts conducting jack rabbit campaigns. B. B. Richards, of the Utah District, writes: "Results in Boxelder County, where we have had perhaps our most extensive campaign, will no doubt result in the killing of more than 250,000 rabbits. Extensive operations were conducted in five communities and practically every community which undertook the work in a systematic way obtained very satisfactory results." I. N. Gabrielson, of the Oregon District, says that over 278,300 rabbits have been destroyed during campaigns carried on in Oregon. Leo K. Couch, of the Washington District, reports that the final checking up in central Washington indicated the most successful campaign against jack rabbits yet conducted. A total of 155,500 rabbits were killed from November to February inclusive, in six counties, by poisoning, driving, and trapping.

W. E. Crouch, of the Idaho District, reports that a total of \$22,219.40 has been provided by the counties of Idaho to be expended in cooperation with the Bureau for purchase of poison supplies and hiring of labor to carry on the ground squirrel campaign.

Additional funds have been secured by the release of \$20,000 by the Budget Committee to be used in the States of Washington, Oregon, and Idaho to control the rabies outbreak. Hunter L. L. Englund has received a temporary appointment as field assistant in the Washington District to assist Dr. Bach in the supervision of hunters in the rabies area, where 650 coyotes and 43 bobcats have been captured in five months.

One of the interesting happenings during the month of April on the Experimental Fur Farm was the birth of a litter of martens. This litter was first observed April 10.



## FOOD HABITS RESEARCH

E. R. Kalmbach gave a talk on April 28 before the Association of Virginia Biologists, at Lynchburg, on the subject of the introduced starling.

## GAME AND BIRD RESERVATIONS

This Division has entered the movie field and two films entitled "National Bird Refuges" and "Anne's Aigrette" are now ready for distribution in the same way as other Department films.

Fred M. Dille, Reservation Inspector, was in the Washington Office during the week of April 23-29 for conferences regarding matters pertaining to the reservations, principally in connection with the new game fence under construction at the Niobrara Reservation which, when completed, will inclose more than 4,300 acres. It is expected that this new range will be ready for the animals about the end of the coming summer, after which it will be unnecessary to provide winter hay and forage as heretofore.

Construction work has been going on at Sullys Hill Game Preserve for several years, but in the interest of economy this was slowed down considerably last season. It is expected that this season all work now under way will be finished, including a new entrance road and gateway at the hostess house, water supply and sewage systems in connection with it and the other buildings, and a new game fence around the lake, shutting it off from the range where the buffalo, elk, and deer are confined, so that the lake will be accessible to visitors to the picnic grounds. It is probable that an open-air lookout will be built this season on the top of Sullys Hill, which is the highest point for many miles about, affording a fine view of the surrounding country.

Andrew Hodges, warden of the National Bison Range, reports 28 buffalo calves already on the range; and A. P. Chambers, warden of the Wind Cave Preserve, reports 5 buffalo calves at that reservation. All the buffalo have passed well through the excessively long and severe winter.

Reports from the Elk Refuge during April show that severe conditions still prevailed there with the elk showing the effects of continued winter weather.

In order more effectively to administer the game and bird reservations, especially the big game preserves, the following acts on reservations have been forbidden by the Secretary, under date of May 4: (1) Entering any game inclosure without permission; (2) carrying firearms without permission; (3) permitting dogs to run at large; (4) setting fires; (5) cutting, damaging, or removing timber or trees; (6) allowing domestic animals to enter without permission; and (7) injuring or destroying signs, fences, or other property of the United States.

### CHAPTER 10

The first part of the chapter discusses the importance of maintaining accurate records of all transactions.

#### 10.1 Introduction

This section introduces the chapter and outlines the main topics to be covered.

The second part of the chapter discusses the various methods used to collect and analyze data.

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## MIGRATORY BIRD TREATY AND LACEY ACTS

Mrs. Katherine Tippetts, President of the Florida Audubon Society and residing at St. Petersburg, Fla., visited the Bureau on May 2 for a conference. For a number of years she has taken an active part in bird protection in Florida and has asked the Biological Survey to cooperate in drafting a new game law for the State.

Hon. W. H. Wallace, of Saginaw, Chairman of the Michigan Department of Conservation, visited the Bureau recently in the interest of matters relating to game in his State.

G. A. Lawyer returned to Washington April 14 after an extended trip through the West and South covering a period of more than two months. While absent from Washington, he conferred with Federal game wardens, State game officials, sportsmen, and others in connection with the enforcement of the Federal game laws.

The following appointments were made to the position of U. S. deputy game warden during the month of April:

James M. Jackson, Port Orange, Fla. (temporary).  
Sam P. Kirkpatrick, 200 Brittan St., Shelbyville, Tenn.

Appointments of the following U. S. deputy game wardens were terminated during the month of April:

L. H. Darwin, P. O. Box 384, Seattle, Wash.  
James J. McHugh, Browning, Ill.  
E. W. Bolt, Gridley, Calif.  
Morris G. Adler, 8 East Fourth St., Cincinnati, Ohio.  
Joseph H. Bayer, 7 Daisy St., Rochester, N. Y.  
Chas. W. Brandon, Jr., Philippi, W. Va.  
Theodore Rouault, Jr., Santa Fe, N. Mex.

## Migratory Bird Treaty Act Cases Terminated - Reports received during April.

| <u>Warden</u>       | <u>Cases</u> | <u>State</u> | <u>Violation</u>                                | <u>Fine</u>    |
|---------------------|--------------|--------------|---|----------------|
| Barmeier            | 1            | Missouri     | Killing ducks in close season                   | \$40           |
| Barmeier            | 1            | Missouri     | Possessing ducks in storage during close season | \$40           |
| Barmeier            | 3            | Missouri     | Killing ducks in close season                   | \$35 each      |
| Barmeier            | 3            | Missouri     | Killing ducks in close season                   | \$25 each      |
| Barmeier            | 1            | Missouri     | Killing heron                                   | \$35           |
| Barmeier            | 1            | Missouri     | Possessing heron                                | \$10           |
| Bloxson             | 1            | Maryland     | Possessing wood ducks                           | \$5 and costs  |
| Creighton*          | 1            | Maryland     | Killing ducks from motorboat                    | \$15 and costs |
| Farnham and Tyler** | 1            | Maryland     | Hunting ducks from motorboat                    | \$10 and costs |

\* U.S. Deputy Game Warden

\*\* State Deputy Game Warden.





## Migratory Bird Treaty Act Cases Terminated - Continued.

| <u>Warden</u>            | <u>Cases</u> | <u>State</u> | <u>Violation</u>                 | <u>Fine</u>            |
|--------------------------|--------------|--------------|----------------------------------|------------------------|
| Holmes                   | 1            | Nebraska     | Killing insectivorous birds      | \$5 and costs          |
| Holmes                   | 1            | Nebraska     | Hunting ducks in close season    | \$5 and costs          |
| Pacetti and<br>Whitehead | 12           | Georgia      | Killing doves in close season    | \$20 each and<br>costs |
| Shupee                   | 3            | Texas        | Hunting ducks in close season    | \$25 each              |
| Shupee                   | 4            | Texas        | Selling ducks                    | \$50 each              |
| Shupee                   | 2            | Texas        | Possessing ducks in close season | \$50 each              |

## Migratory Bird Treaty Act Cases Reported to Solicitor for Prosecution.

| <u>Warden</u>            | <u>Cases</u> | <u>State</u> | <u>Violation</u>  |
|--------------------------|--------------|--------------|---|
| Andersen*<br>and Shaver  | 2            | Iowa         | Killing ducks in close season                           |
| Barmeier                 | 2            | Missouri     | Killing ducks in close season                           |
| Ehlers*                  | 2            | Indiana      | Possessing night heron                                  |
| Fidler*                  | 1            | Illinois     | Killing ducks in close season                           |
| Fleming*                 | 5            | Indiana      | Killing ducks in close season                           |
| Holmes                   | 1            | Nebraska     | Killing gull  |
| Hedderly**               | 1            | California   | Selling ducks   |
| Hilliard                 | 1            | New Jersey   | Hunting ducks in close season                           |
| Linebaugh                | 1            | Illinois     | Hunting ducks in close season                           |
| Linebaugh                | 1            | Kentucky     | Killing wood ducks                                      |
| Merrill                  | 3            | Illinois     | Killing ducks in close season                           |
| Merrill and<br>Lindgren* | 1            | Illinois     | Possessing ducks in cold storage during close<br>season |
| Merrill and<br>Fidler*   | 3            | Illinois     | Possessing ducks in close season                        |
| Pacetti                  | 10           | Florida      | Killing doves in close season                           |
| Pacetti                  | 1            | Florida      | Possessing ducks in storage during close season         |
| Pacetti                  | 1            | Florida      | Killing great blue heron                                |
| Perry                    | 1            | Mississippi  | Killing ducks in close season                           |
| Ransom and<br>Fraser**   | 3            | Washington   | Killing ducks in close season                           |
| Shaver                   | 1            | Iowa         | Killing ducks and hunting from motorboat                |
| Shaver                   | 1            | Missouri     | Hunting ducks in close season                           |
| Shupee                   | 2            | Texas        | Hunting ducks after sunset                              |
| Visart                   | 2            | Arkansas     | Transporting ducks in excess of bag limit               |
| Whitehead                | 8            | Georgia      | Killing doves in close season                           |

\* U. S. Deputy Game Warden

\*\* State Deputy Game Warden



## IMPORTATION OF FOREIGN BIRDS AND MAMMALS

During the season for the entry of Mexican quail 37,953 were entered between January 23 and the closing date, April 20, at the ports in Texas, the largest number since shipments began in 1910. Of these, 9,773 were entered at Brownsville; 15,408 at Laredo; and 12,772 at Eagle Pass. Most of these birds were shipped to Kentucky, Maryland, and Pennsylvania, and distributed through the game commissions for propagating purposes. Quail disease appeared at Laredo about February 23 and 500 birds were placed in quarantine, but with this exception few losses occurred from the disease. On the whole the season has been one of the most successful in recent years.

## ALASKA INVESTIGATIONS

L. J. Palmer, Assistant in Charge of Reindeer Grazing Investigations, and E. T. Forsling, Field Assistant, report their arrival at the reindeer experimental station at Unalakleet, April 3. They left Seattle, Wash., early in March.

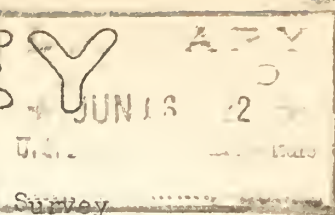
A letter received from Dr. Seymour Hadwen, formerly Chief Veterinarian, Alaska Reindeer Investigations, now spending a few weeks at Ottawa, Canada, states that he has received an invitation from Canadian officials to accompany one of them on an inspection trip to the Grenfell reindeer herd near the Straits of Belle Isle, which, if he accepts, will delay his contemplated trip to England.

Plans are under way for the capture of about fifteen young caribou bulls in the Mount McKinley National Park in the fall and for the construction of an inclosure in which to keep them until next spring. It is then planned to transport the animals on a barge down the Yukon River to a point not yet decided upon and release them with a reindeer herd. This will be the first practical step of the Bureau's contemplated experiments in crossing with caribou in order to improve the stock of reindeer.





# THE SURVEY



Monthly House-Organ of the Bureau of Biological Survey  
United States Department of Agriculture

Vol. 3

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No. 6

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance to Bureau workers, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended for employees of the Bureau, supplementary to the Departmental house-organ, The Official Record.

## GENERAL NOTES

The Fourth Annual Meeting of the American Society of Mammalogists was held at the American Museum of Natural History, New York City, May 16-18, 1922. The 52 members in attendance included the following from the Bureau: E. W. Nelson, President of the Society; H. H. T. Jackson, Corresponding Secretary; E. A. Goldman, Vernon Bailey, and W. P. Taylor. The following papers were presented by Bureau members: "The Present Status of the Elk," by E. A. Goldman; "The Water Supply of Desert Mammals," by Vernon Bailey; and "A Quantitative Determination of Damage to Forage by the Prairie Dog, Cynomys gunnisoni zuniensis Hollister," by W. P. Taylor. The president and corresponding secretary were re-elected. The personnel of committees included, in addition to the president and secretary, the following members of the Biological Survey: Vernon Bailey, W. B. Bell, W. H. Cheesman, A. K. Fisher, T. S. Palmer, E. A. Preble, and W. P. Taylor.

An important event was the dedication by the American Museum of Natural History of the North American Mammal Hall to the memory of the late Dr. Joel Asaph Allen; Prof. Henry Fairfield Osborn presided at this meeting. An address in behalf of the Museum was made by Dr. F. M. Chapman, and Doctor Nelson presented an appreciation of the services to natural history rendered by Doctor Allen.

The following publication of the Bureau was issued in May: Department Bulletin 793, revised, "Lead Poisoning in Waterfowl," by Alexander Wetmore, Assistant Biologist, pp. 12, figs. 4. (Received June 6.)

Among manuscripts submitted in May for approval for outside publication were the following:

Ashbrook, F. G., "Fur Production a Growing Enterprise," for The Black Fox Magazine, American Fox and Fur Farmer, American Agriculturist, Northwest Farmstead, and Fur Trade Review.

Bailey, Vernon, "Johnny and Paddy, Two Baby Beavers," and "Joseph D. Mitchell" (obituary notice), for the Journal of Mammalogy.



Lincoln, Frederick C., "White-footed Mice as Camp Companions," for the Journal of Mammalogy.

McAtee, W. L., "Bird Enemies of Two Exotic Insect Pests," and "Food Habits of Two Owls in Britain," for The Auk.

Metcalf, F. P., "Notes on Missouri Marsh and Aquatic Plants," for the Journal of the Washington Academy of Science.

#### BIOLOGICAL INVESTIGATIONS.

Dr. Walter P. Taylor addressed the Journal Club at the Laboratory for Experimental Evolution of the Carnegie Institution of Washington, at Cold Spring Harbor, N. Y., May 18, on the work of the Biological Survey and on a quantitative determination of rodent damage to forage.

E. A. Goldman delivered an address on "The Relationship of Forestry and Forest Fires to Game and Other Wild Life," before the Forestry Convention at Macon, Ga., on June 7. He also made an examination of the conditions affecting deer in the vicinity of Blackbeard Island, where the animals have apparently increased rapidly, owing to protection accorded them. He returned to Washington June 11.

#### ECONOMIC INVESTIGATIONS.

A. C. Davis, clerk in the office of the Predatory Animal Inspector at Billings, Mont., died suddenly, May 29. Mr. Davis was appointed to this position January 20, 1922, and performed his duties in a very capable manner. Sympathy is extended to Mr. Davis' wife and two children who survive him.

Invitations have been received for the marriage of Miss Irene Handley to Howard Beard, at San Angelo, Tex., June 15. Miss Handley, who has been employed as clerk in the San Angelo office for the past two years, resigned May 31. Congratulations and best wishes are extended to Mr. and Mrs. Beard.

M. E. Musgrave gives us the following interesting story: "Hunter Fred Ott was sent to the ranges near Hackberry, Ariz., to take three wolves. He succeeded in trapping one, but the other two refused to come near traps or to take poison. Ott's instructions were to get them regardless of the method, so he took his bed and made it on the lee side of a tank where the wolves watered nearly every night. Just as darkness came on, some cattle came running toward the tank but went right through and a minute later two jack rabbits came dashing past; Ott knew that there was something coming of which these animals were afraid. Within a few seconds the old male wolf showed up at the edge of the junipers. The hunter allowed him to come as close as he would before firing, but missed on account of the darkness. The female not locating the report of the gun charged right down on Ott's bed and he killed her within ten feet of the muzzle of his gun." Mr. Musgrave and Mr. Ott have every intention of securing the old male, as he is the last of a pack in that part of the State.

L. J. Goldman reports that Hunter Twitchell, of the Idaho district, succeeded in shooting an old mountain lion that had ranged the Little Lost River country for years. This lion was a celebrated stock killer and well known to many stockmen. C. G. Poole reports most gratifying results from the predatory animal work in





California and states that by actual figures economic losses have been reduced 50 to 100 per cent. S. P. Young, of the Colorado district, reports that H. A. Roberts succeeded in trapping a large wolf known as "Big Foot" or "Terror of the Country," his mate, and 7 pups, thus wiping out an entire family. L. J. Goldman reports that Hunter Nichols, of the Idaho district, also trapped a family of wolves. R. E. Bateman reports that 6 mountain lions were taken in Montana during April, two of these being poisoned. Several of the district leaders have reported success in poisoning mountain lions.

As evidence of the modesty of the Government trapper, the following incident is cited. Chester Hight, of the Oregon district, reported in his itinerary for May 13 "Rode southwest line. Trapped bear No. 476 in coyote set. Saved skull and skin. Stomach contents empty." However, Inspector Williams learned from Herbert Egbert, prominent stockman of Wasco County, that Mr. Hight had his clothing torn off and received several scratches about his body before he finally succeeded in clubbing the 300-pound bear to death.

Louis Knowles reports that Troy C. Beach, who has been working in the Wind Cave National Game Preserve, took 9 coyotes during April, and states that the killing of antelope there has apparently ended. However, there is known to be one coyote remaining on the game preserve which has so far escaped capture and Mr. Beach is planning to use a live coyote as a decoy in trapping him.

C. R. Landon, of the Texas district, reports that in April J. H. Edwards captured 2 notorious red wolves that had killed upwards of 200 well-bred sheep as well as preying to a considerable extent upon neighboring ranches.

C. J. Bayer reports that Bud Dalrymple did an excellent piece of work in the Jule Creek district, Wyo., during the month of April, by taking 3 old wolves and 11 pups.

Five litters of fox pups are reported at the Experimental Farm, Keeseville, N. Y., born during April.

D. A. Gilchrist, of Arizona, reports that in a pocket gopher trapping contest held in Maricopa County, in which 37 rural schools participated, 1,135 boys caught over 36,000 gophers. Some of the boys made remarkable records, the highest count being 1,450 tails submitted by Arthur Shepard, of Buckeye, who won the first prize of \$15. The cost of the campaign averaged one-half cent per gopher. The county formerly paid a bounty of five cents, thus making the campaign an actual saving for the taxpayers of \$1,622, not including damage which would have been inflicted on crops by the rodents.

R. S. Zimmerman says that very active interest is manifest in North Dakota in ground squirrel campaigns. During April 2,535 bushels of poisoned grain were used in twelve counties.

B. J. Melton is planning an extensive cooperative campaign against prairie dogs in Cimarron County, Okla.





Herbert R. Wells, of South Dakota, is utilizing a successful method of obtaining interest and cooperation in pocket gopher eradication work. Demonstrations are held in badly infested fields along frequented roads. Notices are then posted on the edges of the fields calling attention to the results of the work.

A. E. Gray reports that "follow-up" work in poisoning prairie dogs in Texas shows that a good 90 per cent control or better resulted from the first application.

A. M. Day, of Wyoming, and W. E. Crouch, of Idaho, have completed arrangements to conduct an intensive rodent campaign in Star Valley, part of which is in Wyoming and part in Idaho.

E. E. Horn, who has been on furlough attending Leland-Stanford University, returned to duty in the Oregon district, April 1.

An interesting experiment was made in the Washington district to determine the effect of poisoned grain on Chinese pheasants. Grain prepared as bait for Columbia ground squirrels, containing 1 ounce of strychnine alkaloid to 12 quarts of oats, was fed to four of the birds under observation, with no noticeable ill effects.

James Silver returned on May 26 from conferences with Extension officials in Ohio, Indiana, Illinois, Wisconsin, and Michigan. He reports that the subject of rat control is growing in popularity among county agents and home demonstration agents of these States. Expert assistance will be arranged for organized anti-rat campaigns as soon as possible.

On his trip Mr. Silver learned of further evidence as to the destructiveness of the skunk. In the bee-raising section of northeastern Ohio skunks lie in wait at night at the entrances of bee hives, catching and devouring the bees as they leave the hives. A single skunk has been known to destroy 1,000 bees in one night. This damage has become so extensive that the apiarists have to build fences about the hives as protection against the marauders.

#### GAME AND BIRD RESERVATIONS

Major H. F. Stone, in charge of Game and Bird Reservations, left on May 15 for a tour of inspection in the West. He will visit during this trip the Carlsbad, Rio Grande, Salt River, Anaho Island, Pathfinder, Strawberry Valley, North Platte, and Belle Fourche Bird Reservations, and the Wind Cave Game Preserve.

The following reservation wardens have resigned: R. H. Pyfrom, Charlotte Harbor Group of Reservations, Florida; Russell A. See, Pathfinder Bird Reservation, Wyoming; and Michael Wagner, Shoshone Bird Reservation, Wyoming.

George M. Riddick, warden of the Big Lake Bird Reservation, Arkansas, has been temporarily detailed to the Niobrara Reservation, Nebraska, to assist Fred M. Dille, inspector at that preserve during the month of June and to take charge of the reservation during the summer months in the absence of Mr. Dille. L. L. Bryan, assistant warden, will have charge of Big Lake Reservation in the absence of Mr. Riddick.

D. C. Nowlin, warden of the Elk Refuge, reports that the last hay was fed to the elk on April 24, and his report for the week beginning May 21 stated that some small snowdrifts were yet on the refuge and a few elk in the vicinity.



## MIGRATORY BIRD TREATY AND LACEY ACTS.

G. A. Lawyer was in New York City, May 27, and in Pleasantville, N.J., May 29, in connection with matters relating to the enforcement of the Migratory Bird Treaty Act.

The Bureau learned with regret of the death on May 8 of the wife of Deputy Warden James W. Ibach, of Cairo, Ill.

Ora L. Hinton, 301 N. Ash St., St. Marys, Ohio, was appointed to the position of U. S. Deputy Game Warden, effective May 16.

Appointments of the following U. S. Deputy Game Wardens were terminated during the month of May:

Daniel J. Yoakum, New Meadows, Idaho.  
Arthur Thomas, 2107 W. 16th St., Little Rock, Ark.  
Hilton A. Robertson, Box 262, Springville, Utah.  
William Preece, Vernal, Utah.  
Robert E. Lawson, Lorena, Tex.  
Geo. W. Schwager, 1710 Garden St., San Antonio, Tex.  
Ralph T. McGrath, 2176 E. 75th St., Chicago, Ill.  
Albert F. Dillahay, Dover, Del.  
Joseph A. Gannaway, 1226 Sixth St., Arkadelphia, Ark.

Effective May 27, 1922, an order was issued by the Secretary of Agriculture permitting full-salaried employees of the Fish and Game Commission of Montana to kill certain migratory birds for the purpose of protecting game fish in the rivers, lakes, and streams in the State. The permission does not extend, however, to the waters of the Yellowstone and Missouri Rivers. The birds covered by the order include mergansers, bitterns, great blue herons, little blue herons, green herons, and black-crowned night herons. The order provides that all birds killed pursuant to the permission contained therein shall be totally destroyed as promptly as possible.





## Migratory Bird Treaty Act Cases Terminated - Reports received during May.

| <u>Warden</u>              | <u>Cases</u> | <u>State</u> | <u>Violation</u>   | <u>Fine</u>                   |
|----------------------------|--------------|--------------|--|-------------------------------|
| Barmeier                   | 1            | Illinois     | Killing gull   | \$25 and costs                |
| Barmeier                   | 1            | Illinois     | Killing coot from motorboat                              | \$25                          |
| Birsch                     | 1            | Virginia     | Offering to sell heron                                   | \$25                          |
| Bloxson and<br>Creighton*  | 1            | Maryland     | Hunting ducks in close season<br>and with large bore gun | \$50 and costs                |
| Bloxson                    | 1            | Maryland     | Killing sandpipers                                       | \$10 and costs                |
| Bloxson                    | 1            | Virginia     | Selling ducks  | \$100                         |
| Charlton and<br>Lacourse** | 2            | Kentucky     | Hunting ducks from motorboat                             | \$25 each and<br>costs        |
| Collins, W.T.*             | 1            | Maryland     | Selling ducks  | \$10 and costs                |
| Merrill,                   | 1            | Illinois     | Possessing ducks in storage in<br>close season           | \$1 and costs                 |
| Merrill                    | 1            | Illinois     | Killing ducks in close season                            | \$25 and costs                |
| Pacetti                    | 2            | Florida      | Possessing ducks in close<br>season                      | \$25 each                     |
| Pacetti                    | 1            | Florida      | Killing ducks from motorboat                             | \$10                          |
| Pacetti                    | 1            | Florida      | Killing ducks in close season                            | \$50                          |
| Pacetti and<br>Whitehead   | 20           | Georgia      | Killing doves in close season                            | \$10 each                     |
| Pacetti and<br>Whitehead   | 2            | Georgia      | Killing doves in close season                            | \$5 each                      |
| Perry                      | 1            | Louisiana    | Selling ducks  | \$100                         |
| Ransom                     | 1            | Montana      | Killing ducks after sunset                               | \$1                           |
| Ransom and<br>Fraser**     | 3            | Washington   | Killing ducks in close season                            | \$25 each                     |
| Shupee                     | 3            | Texas        | Killing bitterns and rails                               | \$5 each                      |
| Shupee                     | 13           | Texas        | Hunting ducks from motorboat                             | \$1 each                      |
| Smith                      | 2            | Iowa         | Illegally transporting ducks                             | \$5 and costs<br>of \$18 each |
| Steele                     | 1            | Oregon       | Killing band-tailed pigeon                               | \$25                          |
| Tonkin                     | 2            | Oregon       | Killing cranes   | \$10 each                     |
| Tonkin                     | 2            | Oregon       | Hunting ducks after sunset                               | \$25 each                     |
| Visart                     | 2            | Arkansas     | Killing ducks from motorboat                             | \$20 and costs<br>each        |
| Visart                     | 1            | Arkansas     | Killing nongame birds                                    | \$5                           |
| Visart                     | 1            | Arkansas     | Possessing ducks in storage<br>in close season.          | \$10 and costs                |
| Visart                     | 15           | Arkansas     | Purchasing ducks   | \$10 each and<br>costs        |
| Visart                     | 1            | Arkansas     | Selling ducks  | \$20 and costs                |
| Visart                     | 1            | Arkansas     | Selling ducks  | 4 months in jail              |
| Yerger                     | 1            | Arkansas     | Selling ducks  | \$20 and costs                |
| Yerger                     | 1            | Arkansas     | Selling ducks  | \$25 and costs                |
| Yerger                     | 1            | Mississippi  | Killing doves  | \$10                          |

\* U.S. Deputy Game Warden

\*\* State Deputy Game Warden



## Migratory Bird Treaty Act Cases Reported to Solicitor for Prosecution.

| <u>Warden</u>            | <u>Cases</u> | <u>State</u> | <u>Violation</u>                                      |
|--------------------------|--------------|--------------|---|
| Allen** and Blackwell ** | 1            | Virginia     | Killing ducks in close season                         |
| Bergquist* and Vanselow* | 2            | Illinois     | Hunting ducks in close season                         |
| Barmeier                 | 1            | Missouri     | Killing duck in close season                          |
| Birsch                   | 2            | New York     | Transporting more than bag limit of ducks             |
| Bloxson                  | 1            | Maryland     | Selling and transporting ducks in violation State law |
| Charlton                 | 1            | Ohio         | Selling goose   |
| Fleming*                 | 7            | Indiana      | Selling ducks   |
| Greiner*                 | 2            | Iowa         | Killing ducks in close season                         |
| Holmes                   | 1            | Nebraska     | Killing ducks in close season                         |
| Lawyer                   | 3            | Maryland     | Killing sandpipers                                    |
| Lindgren*                | 1            | Illinois     | Killing meadowlark                                    |
| Lindgren*                | 1            | Indiana      | Killing duck in close season                          |
| Merrill and McQuirk*     | 1            | Montana      | Shipping grouse in violation State laws               |
| Pacetti                  | 1            | Florida      | Killing ducks from motorboat                          |
| Payton*                  | 1            | Iowa         | Killing ducks in close season                         |
| Ransom                   | 4            | Washington   | Transporting more than bag limit of geese             |
| Shaver and Andersen*     | 3            | Iowa         | Killing ducks in close season                         |
| Tieken*                  | 5            | Iowa         | Killing ducks in close season                         |
| Tonkin                   | 1            | Oregon       | Possessing parts of swan                              |
| Tonkin                   | 1            | Idaho        | Hunting ducks in close season                         |
| Visart                   | 1            | Arkansas     | Selling ducks   |
| Whitehead                | 15           | Georgia      | Killing doves in close season                         |

\* U.S. Deputy Game Warden

\*\* State Deputy Game Warden

## IMPORTATION OF FOREIGN BIRDS AND MAMMALS.

During the present spring importations of Hungarian partridges have been resumed for the first time since the war. Two shipments have been entered at the port of New York; one of more than 1,000 birds for the Game Commission of Montana, and the other of 200 birds for New York. Recent reports show that the Hungarian partridge has become well established in certain parts of the Northwest and that it is fairly abundant in several counties in eastern Washington. For several years prior to the war large numbers of these birds were imported, but later the shipments diminished on account of high prices and the lack of success in establishing the birds in many places where they were liberated.

## ALASKA INVESTIGATIONS

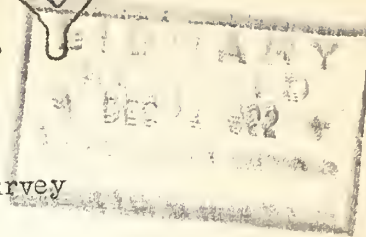
Donald H. Stevenson, Reservation and Fur Warden, who has been spending the winter on Unimak Island making an investigation of bird and mammal life, has returned to Unalaska for the Summer.

The Bureau is receiving many inquiries relative to islands available for fur-farming in Alaska, showing that the industry is receiving increased attention.



# THE SURVEY

Monthly House-Organ of the Bureau of Biological Survey  
United States Department of Agriculture



Vol. 3

Washington, D. C., July 13, 1922.

No. 7

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance to Bureau workers, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended for employees of the Bureau, supplementary to the Departmental house-organ, The Official Record.

## GENERAL NOTES

Doctor Nelson attended a meeting of the Committee on Conservation of the Camp Fire Club of America at the Williams Club, New York City, on June 13, where matters relating to the conservation of game and land-fur-bearing animals in Alaska were under discussion. While in New York he conferred also on the same subjects with officers of the Boone and Crockett Club, the American Game Protective Association, and the New York Zoological Society.

Sympathy is extended to Dr. and Mrs. T. S. Palmer in the death of Mrs. Palmer's mother, Mrs. C. W. H. Ellis, which occurred at the Palmer home in Washington on June 23, 1922.

The following publications of the Bureau were issued in June:

Poster No. 41 (Bi), "Open Seasons for Game, 1922," by George A.

Lawyer and Frank L. Earnshaw, issued June 15.

Department Circular 225, "Annual Report of the Governor of Alaska on the Alaskan Game Law, 1921," by Scott C. Bone; pp. 7, issued June 15 (received from Printer, July 1).

Among manuscripts submitted in June for approval for outside publication were the following:

Couch, Leo K., "Distribution of Douglas Ground Squirrels in Washington State," for The Murrelet.

Jewett, Stanley G., "The So-called Dwarf Bear of Oregon," for The Murrelet.

Lincoln, F. C., "A Note on the Domestic Pigeon," for the Proceedings of the Biological Society of Washington.

Malloch, J. R., "Strange Feeding Habit of a House Sparrow," for The Auk.

Metcalf, F. P., "Drainage or Conservation," for the Literary Digest.





Wetmore, Alexander, "Fossil Birds from Southeastern Arizona," Professional Paper for the U. S. Geological Survey; "Remains of Birds from Caves in the Republic of Haiti," for Smithsonian Miscellaneous Collections; "Present Status of the Carolina Wren Near Washington, D. C.," for The Auk; "The Evening Grosbeak Near Washington, D. C.," for The Auk.

Miss Helen M. Moore, stenographer in the Administrative Office, has been transferred to the Office of Inspection, and Mr. Myron P. Jacoby, who has been employed in the War Department, has been transferred to the Bureau to fill the vacancy.

### BIOLOGICAL INVESTIGATIONS

A. H. Howell made a short trip by automobile to Chincoteague Bay, Maryland, May 27-30. Black ducks were found breeding on an island in the bay and a half-grown young bird was picked up on the marsh. A number of specimens of seaside sparrows, marsh wrens, and other small birds needed for the collection were secured on Assateague Beach.

Dr. Walter P. Taylor, who has been in Washington for the past few weeks engaged in studies in connection with the preparation of his report on the Biological Survey of the State of Washington, left on July 1 for his official station, La Jolla, Calif.

Dr. H. C. Oberholser visited Camp Bradley on Edgewood Arsenal Grounds, near Magnolia, Md., June 29 and 30, where he lectured and conducted two field excursions for girl scout leaders.

In the bird-banding work conducted by F. C. Lincoln, notable "returns" from marked birds are occasionally received. The following two recent returns will be of interest: A robin banded as a fledgling on July 8, 1917, at Wilmington, Del., was found dead on May 14, 1922, in a yard about a quarter of a mile from the place where it was banded almost five years before. At Branchport, N. Y., on April 6, 1922, a buffle-head was banded that had been caught on a "set line" the night before; eleven days later, on April 17, it was found entangled in a herring net in Georgian Bay, near Collingwood, Ontario. Unfortunately its liking for fishing tackle had resulted in its death.

A mimeographed leaflet under the title "Bird Banding Notes" is being issued from time to time for the information of bird-banding collaborators, the number of whom is now more than 500.

### ECONOMIC INVESTIGATIONS

Dr. A. K. Fisher left Washington on June 23 to attend the Seventh Annual Meeting of the Texas Sheep and Goat Raisers' Association, at San Angelo, June 27 - 30, for the purpose of addressing them on matters pertaining to the cooperative work of the Bureau in the control of predatory animals and injurious rodent pests. He had the opportunity of talking over with the Governor and representative stockmen of western Texas the extension of a cooperative campaign for the eradication of these pests. He returned to Washington on July 5 and reported a most interesting meeting of the stockmen.



Dr. W. B. Bell returned on June 20 from a trip through the Southwestern and Middle-western States during which he conferred with representatives of the Bureau, State officials, and others interested in our cooperative work in Arkansas, Oklahoma, Texas, New Mexico, Arizona, California, Nevada, Utah, Wyoming, Colorado, Kansas, Nebraska, and Iowa. He reports conditions generally very satisfactory and the work moving forward effectively. Steadily increasing confidence in the leadership and methods employed by Bureau representatives, on the part of State officials, farmers, and stockmen, was evident. The indications are that, despite financial depression prevalent throughout the country, our work has made a consistent and gratifying advance during the past year.

Lisle Morrison left Washington on June 24 to visit field offices in the Northwestern States, including North Dakota, Montana, Washington, Oregon, Wyoming, Colorado, New Mexico, South Dakota, and Kansas, for the purpose of assisting leaders of the district organizations in correlating their office work more closely with that of the Washington office.

J. S. Ligon visited Washington during the latter part of June to discuss matters affecting the predatory animal work in progress in Michigan and the relationship of this work to conditions prevailing in adjacent States, with a view to the development of plans to serve more effectively the livestock and game interests of this region through the control of predatory animals. He returned to Michigan on June 27 to continue the direction of field operations there. He was accompanied on the trip by Mrs. Ligon.

Dr. Karl B. Hanson made a trip to Muskegon, Mich., and vicinity during the latter part of June in response to an urgent call from the officials of the National Fox Breeders' Association of America to consult and advise them relative to the control of an outbreak of distemper which had made its appearance among the silver foxes of that region.

Walter Perry, who has served for some time as assistant to Mr. Day in the Wyoming-Nebraska District, tendered his resignation effective June 30.

Plans have been completed for the transfer of E. E. Horn from rodent control operations in Oregon to work in connection with eradication methods. His first assignment will be to investigate damage done to walnut orchards by silver-gray squirrels and to ascertain methods of controlling these injurious pests. He will later be assigned to investigations upon prairie dogs and other rodent pests in Arizona.

O. L. Coleman, who has been employed on the State rolls in the cooperative work against predatory animals and injurious rodents in New Mexico for some years, was appointed predatory animal inspector, effective July 1, and assigned to field operations with Mr. Landon in Texas.





FOOD HABITS RESEARCH

F. P. Metcalf has begun the second season's survey of the food resources for wildfowl of the lakes and marshes of Minnesota. He will be assisted by A. C. Martin, who has been teaching botany in North Carolina State College.

Charles C. Sperry, after a short vacation at his home in Beverly, Kans., will engage in work in Montana similar to that in Minnesota. Advantageous co-operative arrangements have been made and it is hoped to complete investigation of all of the more important bodies of water in the State.

Charles O. Handley, of Washington and Lee University, and Raymond B. Cowles, of Cornell University, have been appointed temporary assistants. Mr. Handley will make analyses of the stomach contents of fish-eating birds, and Mr. Cowles of those of toads.

GAME AND BIRD RESERVATIONS

It is with regret that we announce the resignation of Major H. F. Stone, effective at the close of the fiscal year, June 30. Cordial good wishes for his future welfare and success are extended. During his administration of the big-game and bird refuges noticeable progress was made in bringing into first-class order the information files relating to that work, especially the building up of detailed histories of the more important refuges. Among various other valuable services rendered the Bureau by him may be mentioned the recently issued lists of Federal and State Game and Bird Refuges, which were prepared under his direction and form important contributions to the information valuable to all interested in the conservation of our wild life.

Effective July 1, the supervision of big-game and bird reservations was placed in charge of Smith Riley, formerly District Forester at Denver, Colo., and during the past two years connected in an advisory capacity with the administration of forestry work in Rock Creek Park, Washington, D. C. Mr. Riley was the first district forester at Denver, serving in that capacity from the time the office was established in 1908 until he came to Washington in 1919.

Major Stone returned on June 21 from a tour of inspection of the following reservations: Carlsbad and Rio Grande, New Mexico; Salt, River, Arizona; Anaho Island, Nevada; Strawberry Valley, Utah; North Platte, Nebraska; Pathfinder, Wyoming; Belle Fourche, South Dakota; and Wind Cave, South Dakota. He also attended the meeting in Salt Lake City, Utah, on June 6, at which the county sportsmen's associations combined into a State organization.

The big game on the preserves has increased and has suffered no serious losses, with the exception of the antelope in the herds at the Bison Range, Montana, and at Wind Cave Preserve, South Dakota. These losses have been very serious, having been caused by depredations of coyotes and bobcats during the extremely severe weather last winter. The herd at the Bison Range dwindled from 60 to 17, and at Wind Cave Preserve the antelope were reduced from 34 to 14. Fawns born this year, however, have brought the number at the Bison Range up to 25, and at Wind Cave 6 fawns are reported, making a total of 20 in that herd.



July, 1922.

The winter of 1921-22 is reported to have been the severest on record in relation to the elk at the Elk Refuge, Wyoming. Heavy thaws followed early snows, and the freezing of the resulting slush into solid ice over the pasture lands made it impossible for the elk to get forage. The supply of more than 1,000 tons of hay was exhausted in April, and as a result, approximately 20 per cent of the total number of elk that came to the Refuge perished. This was not so many as in the winter of 1919-20, but probably a larger percentage of those that came to the Refuge. The greatest number of elk reported there at any one time during the winter was 11,350.

The 24 ring-necked pheasants released at the Bison Range in September, 1920, have increased to about 100. Nine pairs of European partridges received in the spring have increased to 25.

A light Ford truck has been obtained from the surplus supply of the Post Office Department for use at Wind Cave Preserve, where it will be a valuable addition to the fire-fighting apparatus and will facilitate the work on various improvements.

F. W. Triska, who has been acting as Inspector Dille's representative at Sullys Hill Preserve, will go to the Elk Refuge early in July for permanent duty as assistant to D. C. Nowlin.

George M. Benson, warden of the Lake Malheur Bird Reservation, Oregon, will be on temporary duty at the Bison Range during the months of July and August to assist Warden Hodges.

Bryan Nowlin, who has been assistant warden at the Elk Refuge for several years, has been transferred to the Bison Range where he will be assistant to Warden Hodges.

Through the courtesy of the Navy Department, the warden's house on the Tortugas Keys Reservation, Florida, which was completely undermined by the cutting away of the shore and was in danger of falling into the water, has been moved to the opposite (eastern) side of the key and substantially set up on new piling.

S. W. Warren has been employed as watchman of the Walker Lake Reservation, Arkansas, to protect the birds during the nesting season.

#### MIGRATORY BIRD TREATY AND LACEY ACTS

The game law poster for 1922 was issued on June 15 this year, the earliest date it has ever been available for distribution. Last year the date of issuance was June 30. Wardens and deputies have been supplied with copies for display at advantageous points in their districts.

The Secretary of Agriculture recently issued an order authorizing the killing of band-tailed pigeons in Oregon between June 1 and July 15. Birds may be killed, however, only by persons owning or leasing land on which cherries or





July, 1922.

other small fruits are grown, by members of such person's immediate family or by his bona fide employees, and the person owning or leasing the land must first obtain an individual permit, countersigned by the chief official in charge of the enforcement of the fish and game laws of Oregon. The order also provides that band-tailed pigeons may be killed only when they are committing, or are about to commit, serious injury to growing cherries or other small fruits. Persons desiring relief from the depredations of band-tailed pigeons should communicate with A. E. Burghduff, State Game Warden, Portland, Ore.

The following appointments were made to the position of U. S. Deputy Game Warden during the month of June:

David Howard Benson, 719 Broadway, Far Rockaway, L.I., N.Y.  
William I. Lyon, 811 N. Sheridan Rd., Waukegan, Ill.

Appointments of the following U. S. Deputy Game Wardens were terminated during the month of June:

Henry Fox, Mercer University, Macon, Ga.  
Chas. C. Dale, Gallipolis, Ohio.  
Geo. W. Anderson, 450 Gazette Bldg., Reno, Nev.  
Fayette E. Smith, Passagrille, Fla.





## Treaty Act Cases Terminated - Reports received during June.

| <u>Warden</u>                        | <u>Cases</u> | <u>State</u> | <u>Violation</u>                                       | <u>Fine</u>         |
|--------------------------------------|--------------|--------------|--|---------------------|
| Farnham<br>and Fast                  | 2            | Maryland     | Killing ducks from motorboat                           | \$10 each and costs |
| Farnham<br>and Fast*                 | 1            | Maryland     | Killing ducks from sailboat and offering to sell ducks | 30 days in jail     |
| Fleming*<br>and Barber**             | 5            | Indiana      | Hunting ducks in close season                          | \$10 each and costs |
| Fleming*                             | 4            | Indiana      | Selling ducks  | \$10 each and costs |
| Lawyer                               | 2            | Maryland     | Killing sandpipers                                     | \$5 each            |
| Lawyer                               | 1            | Maryland     | Killing sandpipers                                     | \$5 and costs       |
| Merrill and<br>Fidler*               | 1            | Illinois     | Possessing ducks in close season                       | \$25 and costs      |
| Merrill and<br>Fisher*               | 1            | Illinois     | Possessing ducks in storage in close season            | \$5 and costs       |
| Merrill,<br>Turner**and<br>Osborne** | 2            | Illinois     | Killing ducks in close season                          | \$25 each and costs |
| Pacetti                              | 1            | Florida      | Hunting ducks from motorboat                           | \$50                |
| Perry                                | 16           | Tennessee    | Hunting doves in close season                          | Costs of \$5 each   |
| Random                               | 2            | Washington   | Hunting ducks in close season                          | \$25 each           |
| Tonkin                               | 3            | Idaho        | Killing herons and killdeer                            | \$5 each            |
| Vanselow*                            | 1            | Illinois     | Possessing dead robin                                  | \$12.50             |

\* U. S. Deputy Game Warden

\*\* State Deputy Game Warden

## Treaty Act Cases Reported to Solicitor for Prosecution.

| <u>Warden</u>           | <u>Cases</u> | <u>State</u> | <u>Violation</u>                                 |
|-------------------------|--------------|--------------|--|
| Barmeier                | 3            | Missouri     | Hunting ducks in close season                    |
| Barmeier                | 2            | Missouri     | Hunting ducks in close season and from motorboat |
| Birsch                  | 3            | Virginia     | Killing coots in close season                    |
| Bloxson                 | 1            | Virginia     | Killing dowitchers                               |
| Charlton                | 1            | Ohio         | Hunting ducks after sunset                       |
| Fleming*                | 3            | Indiana      | Attempting to kill ducks in close season         |
| Greiner*                | 2            | Iowa         | Hunting ducks in close season                    |
| Holmes                  | 2            | Nebraska     | Killing nongame birds                            |
| Merrill and<br>Merrill* | 3            | Illinois     | Hunting ducks in close season                    |
| Perry                   | 1            | Mississippi  | Possessing body of swan                          |
| Smith                   | 1            | Maine        | Killing ducks in close season                    |
| Smith                   | 2            | Maine        | Hunting ducks in close season and from motorboat |
| Whitehead               | 1            | Georgia      | Killing ducks in close season                    |

\* U. S. Deputy Game Warden



## ALASKA INVESTIGATIONS

E. P. Walker, chief fur warden, has been making a reconnaissance of islands used as fur farms along the southern coast of Alaska in the Bureau's power boat "Sea Otter" (formerly the "Regal"). He reports a very successful trip so far, the new engine recently installed in the boat "running like a clock!"

H. W. Johnston, field assistant in reindeer investigations, has left Nome for the States. After a month's vacation with his family at Boise, Idaho, he will go to the Great Basin Experiment Station in Utah and the Jornada Range Reserve in New Mexico, spending two weeks at each station, making a study of grazing and range plants in connection with investigations being carried on relative to reindeer grazing.

Dr. Seymour Hadwen, formerly chief veterinarian in the Alaska investigations, telegraphed the Bureau that he was leaving Ottawa, Canada, on July 3 for England. On July 25 he will take up duties as reindeer specialist under the Bureau and will visit northern Europe in connection with reindeer investigation work.

The official headquarters of Lawrence J. Palmer, assistant in charge of reindeer investigations, and his assistants, has been changed from Unalakleet to Nome, effective July 1. The Reindeer Experiment Station also will be moved to Nome.

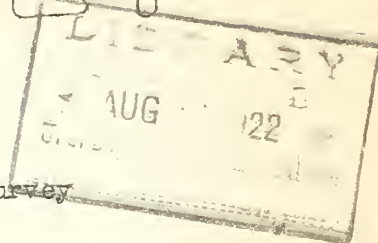
Frank G. Ashbrook, assistant biologist of the Economic Investigations Division, left Washington on June 16, sailing from Seattle on June 23, for a three months' trip to Alaska to carry on extensive investigations on fur farms on the islands in the southern and southeastern part of the Territory, including the Kenai Peninsula. During the past two years he has been conducting similar studies on fur farms in the United States and Canada. He joined E. P. Walker, chief fur warden, on the Bureau's power boat "Sea Otter," at Seward, on July 5, and during his stay in Alaska his work will be conducted on this boat. The Biological Survey and the Forest Service have issued a joint call to the fur farmers of Alaska to meet at convenient places to discuss problems with a view to improving conditions and establishing organizations where feasible, and Messrs. Ashbrook and Walker will attend as many of these meetings as possible.





# THE SURVEY

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United States Department of Agriculture



Vol. 3

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## GENERAL NOTES

There is reproduced on the last page of this issue a chart of the organization of the Bureau as of July 1, 1922.

Doctor Nelson visited the Experimental Fur Farm, at Keeseville, in the latter part of July, during a few days spent in the vicinity with Mr. J. B. Burnham, on the farm of the latter in the Adirondacks.

Sympathy is extended to Mrs. A. B. Morrison, whose sister, Mrs. Jennie Bechtler, died in Washington, July 17, 1922.

The following publication of the Bureau was received in July: Farmers' Bulletin 912, revised, "How to Attract Birds in the East Central States," by W. L. McAtee, In charge Food Habits Research. Date of issue, "May, 1922."

Among manuscripts submitted in July for approval for outside publication were the following:

Cooke, May T., "The Cerulean Warbler at Washington, D. C.," for The Auk.

Jackson, H. H. T., "Notes on Summer Birds of the Mamie Lake Region, Wisconsin," for The Auk; Review of book "Wild Brother," by William Lyman Underwood, for the Journal of Mammalogy.

Lincoln, Frederick G., "The Capture of Waterfowl in Fish Nets," for The Condor.

McAtee, W. L., "Friendly Birds on the Golf Course," for Bulletin of the Green Section on the U. S. Golf Association.

Malloch, J. R., "The Cordylurid Genus *Paralleloma* and its Nearest Allies (Diptera)," for Proceedings of the Entomological Society of Washington; "A New Borborid from Maryland (Diptera, Borboridae)," for Bulletin of the Brooklyn Entomological Society; "A New European Anthomyiid (Diptera)," for Notulae Entomologicae.

Oberholser, Harry C., "Description of a New *Oriolus* from the Nicobar Islands," for Proceedings of the Biological Society of Washington; "Notes on the Forms of the Genus *Oreortyx* Baird," for The Auk.



## BIOLOGICAL INVESTIGATIONS

Dr. Alexander Wetmore made an examination of Buzzard Island, South Carolina, near the head of Bull River, to ascertain its potential value as a Federal Bird Reservation, on July 18 and 19. This island, an abandoned quarantine station, formerly occupied by the U. S. Public Health Service, is in the midst of a large area of tidal marsh land, and is frequented by water birds.

Dr. Harry C. Oberholser left Washington on July 18 to visit various points in the Middle West for the purpose of forwarding the work of bird-banding and game protection in that region, and of investigating conditions affecting bird life at a number of localities where drainage projects are contemplated. He will represent the Bureau at the annual session of the American School of Wild Life Protection, now holding at McGregor, Iowa. His proposed itinerary includes also Iowa City, Davenport, and the Winneshiek region, Iowa; Lincoln, Nebraska; and Garden City, St. Louis, and Kansas City, Missouri.

Dr. H. H. T. Jackson left Washington about July 18 to continue field studies in connection with the biological survey of Wisconsin. His work during the present season will be confined mainly to the southeastern part of the State, Dousman being his first station. It is hoped that the necessary summer work may be completed during the present season.

During the past fiscal year, 490 permits for banding birds were issued and nearly 6,000 birds were banded. During 1920, the first year this work was under the charge of the Bureau, only 89 permits were issued.

An unusual type of "return" record for a banded bird is reported by a collaborator at Corning, Ohio, who, on June 29, took from the stomach of a black snake a band that he had placed on a fledgling catbird five days before. A common tern banded as a fledgling, at Brigantine Island, N. J., August 13, 1920, was taken on May 20, 1922, at Paria Bay, Blanchisseuse, Trinidad, British West Indies. This is the second long distance return that has been secured from the banding of common terns, the first being one banded as a nestling on the coast of Maine and recovered four years later in the delta of the Niger River, on the west coast of Africa.

F. C. Lincoln visited Camp Bradley, Magnolia, Md., August 8-9 and addressed the Girl Scouts from Baltimore and the District of Columbia, in camp there, on the desirable features of bird protection. He supplemented his talks by conducting short field trips in the vicinity of the camp.



## ECONOMIC INVESTIGATIONS

Lisle Morrison returned to the Washington office on August 3 from an extended trip chiefly in the Northwestern States where he conferred with the field representatives of the Bureau relative to the handling of the office affairs and arrangements necessary to make the material displayed in connection with the Department exhibits at State fairs of the greatest interest and value to the people in attendance.

The following men have been authorized by the Secretary to represent the Bureau at fairs in their respective districts, at which the exhibit material of the Department will be displayed: D. A. Gilchrist, M. E. Musgrave, F. E. Garlough, C. G. Poole, Joseph Keyes, S. P. Young, W. E. Crouch, L. J. Goldman, Otis Wade, A. E. Oman, R. E. Bateman, E. R. Sans, C. F. Bliss, R. S. Zimmerman, B. J. Melton, E. F. Pope, I. N. Gabrielson, S. G. Jewett, R. H. Wells, Louis Knowles, A. E. Gray, C. R. Landon, L. K. Couch, G. R. Bach, A. M. Day, and C. J. Bayer. Arrangements have been made for these representatives of the Bureau to supplement the material included in the regular Departmental exhibit with a view to increasing its local interest and value. They will also be present to discuss with interested citizens the work which the Bureau is conducting.

Kenneth P. Pickrell received appointment as junior biologist effective July 1 and has been assigned as assistant to M. E. Musgrave in the predatory-animal work in Arizona. Mr. Pickrell has been employed in this work for some time on the State rolls and the Bureau is glad to have him as a member of its staff.

Dr. Earl T. Martin was transferred during the latter part of July from the New Mexico District to Arizona, where he will for a time assist Mr. Musgrave in the conduct of predatory field operations.

E. E. Horn, who has been employed in the rodent field operations of Oregon, has been transferred to the project Eradication Methods, effective July 1. Since that date he has been engaged in an effort to determine practical methods for the control of the Oregon gray squirrel, which has been doing considerable damage. He is completing this assignment and is being detailed to Arizona, where he will conduct experiments in the vicinity of Flagstaff for the purpose of improving methods for the destruction of prairie dogs, and at Phoenix he will make similar efforts to determine the most effective means of combating pocket gophers.

Miss Shumah Quigley resigned as clerk in the Olympia office, effective July 31, in order to accept a position with the Judge of the State Supreme Court.

Mr. and Mrs. Luther J. Goldman are receiving congratulations on the birth of a daughter, at Boise, Idaho, July 13, 1922.





## FOOD HABITS RESEARCH.

W. L. McAtee went to Bar Harbor, Maine, on July 25 to make a survey of the plants available as food for wild ducks in waters of the Lafayette National Park. This investigation is in line with the efforts of this Bureau to increase the available breeding areas for wildfowl in the United States.

E. R. Kalmbach is conducting experiments against the pinyon jays in the vicinity of De Beque, Colo. These experiments will be limited to the duration of the wheat harvest season and represent a continuation of observations made by Mr. Sperry last year at the time these birds were destroying shocked corn.

Charles C. Sperry has begun the survey of the food resources of wild fowl in the lakes and marshes of Montana. He expects to visit Libby, Kalispell, Polson, Missoula, Anaconda, and Dillon before the middle of August.

## GAME AND BIRD RESERVATIONS

Smith Riley, in charge of Game and Bird Reservations, returned on July 31 from a trip of inspection of the Sullys Hill Game Preserve, North Dakota.

Perry E. Wetmore has been appointed reservation warden for the Tampa Bay Group of Reservations, Florida.

Lewis E. Foster, Project Manager, U. S. Reclamation Service, Carlsbad, New Mexico, will cooperate in the protection of the Carlsbad Bird Reservation, assisting Messrs. Fosmark and Holcomb, appointed cooperative wardens at that reservation last year.

Fred M. Dille, Reservation Inspector, is at Sullys Hill Preserve for the months of July and August, superintending the work on improvements being made at that preserve.

Wesley D. Parker has been transferred from the Indian Service to become warden in charge of the Sullys Hill Game Preserve, North Dakota. Mr. Parker was employed as farmer at the Fort Totten Indian School.

P. C. Dahl, of the Reclamation Service, who has been acting as cooperative warden at the Willow Creek Bird Reservation, Montana, resigned July 20.

Serious depredations by ravens on the birds at Lake Malheur Reservation, Oregon, have been reported, and a campaign against these predatory birds will probably be arranged in the near future.



## MIGRATORY BIRD TREATY AND LACEY ACTS

Mr. Lawyer spent several days in Atlanta during the first part of July, cooperating with State game officials and assisting the State game warden in preparing a new game-law bill to be submitted to the Georgia legislature.

Following his work in Georgia, Mr. Lawyer went to Madison, Wis., where on July 11 he attended a meeting called by the Wisconsin Conservation Commission, at which were present the State deputy game wardens, representatives of various sportsmen's organizations throughout the State, and State game officials of adjoining States. Mr. Lawyer in addressing the meeting told of the work being done by the present limited Federal warden force and the need for additional men to perform the work efficiently.

In view of the serious depredations being committed by robins in Idaho on the cherry crops, an order was issued July 20, 1922, by the Secretary, under which robins which become seriously injurious to cherries and other small fruits in the State of Idaho may be killed from May 16 to September 30, inclusive, provided that persons desiring to kill the birds obtain an individual permit to do so from Hon. Otto M. Jones, State Game Warden, Boise, Idaho. Birds may be killed, however, only by a person owning or leasing land on which cherries or other small fruits are grown, by members of his immediate family, or by his bona fide employees.

Mr. Edgar A. Lindgren, of Chicago, Ill., who was appointed U. S. game warden effective July 13, 1922, with headquarters at Council Bluffs, Iowa, was seriously wounded on August 12 or 13 by one or more of three Greeks whom he was in the act of apprehending, according to reports received by the Washington office. A telegram from Mercy Hospital, Council Bluffs, where Mr. Lindgren was taken, states that his condition is critical, about 200 shot wounds being in his back, some of the shot having penetrated the liver. It is apparent from this that Mr. Lindgren was treacherously assaulted from behind. At present writing no details have been received concerning the assault, although we have information to the effect that the three Greeks were apprehended.\*

The following appointments were made to the position of U. S. deputy game warden during the month of July:

Cooper H. Oliphant, P. O. Box 61, Chincoteague, Va.  
Arthur M. Gage, 50 Catherine St., Nyack, N. Y.  
Melvin C. Romberger, 140 Fairmont Ave., Sunbury, Pa.  
Eugene J. Haydel, 1619 N. Johnson St., New Orleans, La.  
Daniel Lynch, c/o Dept. of Conservation, New Orleans, La.  
Victor Sandras, Westwego, La.  
Foster A. Cannon, 238 Bull St., Savannah, Ga.

\* Since the above was written, information has been received stating that Mr. Lindgren died August 17.





Appointments of the following U. S. Deputy Game Wardens were terminated during the month of July:

Gordon T. Doe, Homestead, Fla.  
George W. Pearce, Hayden, Ariz.  
James M. Jackson, Port Orange, Fla.

Migratory Bird Treaty Act Cases Terminated - Reports received during July.

| <u>Warden</u>          | <u>Cases</u> | <u>State</u> | <u>Violation</u>                                   | <u>Fine</u>                               |
|------------------------|--------------|--------------|--|---|
| Bloxsom                | 3            | Delaware     | Hunting ducks after sunset and<br>possessing heron | \$1 each                                  |
| Farnham and<br>Birsch  | 1            | Virginia     | Killing woodpecker                                 | \$1                                       |
| Lindgren*              | 1            | Illinois     | Possessing thrush                                  | \$20                                      |
| Merrill                | 2            | Illinois     | Killing ducks in close season                      | \$15 each and<br>costs of<br>\$14.90 each |
| Merrill and<br>Fidler* | 1            | Illinois     | Killing ducks in close season                      | 36 days in<br>jail                        |
| Merrill and<br>Fidler  | 2            | Illinois     | Possessing ducks in close season                   | \$5 each and<br>costs                     |
| Shaver                 | 1            | Minnesota    | Offering to sell ducks                             | \$15                                      |
| Shaver                 | 6            | Minnesota    | Hunting ducks after sunset                         | \$10 each                                 |
| Shupee                 | 1            | Texas        | Offering to sell aigrettes                         | \$1                                       |
| Shupee                 | 1            | Texas        | Selling ducks                                      | \$100                                     |
| Vanselow*              | 1            | Illinois     | Killing sandpipers                                 | \$10                                      |
| Visart and<br>Delman** | 1            | Oklahoma     | Killing snipe in close season                      | \$50                                      |

\* U. S. Deputy Game Warden

\*\* State Deputy Game Warden

Migratory Bird Treaty Act Cases Reported to Solicitor for Prosecution.

| <u>Warden</u>             | <u>Cases</u> | <u>State</u>   | <u>Violation</u>                                  |
|---------------------------|--------------|----------------|---|
| Andersen*<br>and Shaver   | 2            | Iowa           | Killing ducks in close season                     |
| Barmeier                  | 1            | Missouri       | Offering to sell mourning dove                    |
| Barmeier                  | 2            | Illinois       | Hunting ducks from motorboat                      |
| Breitenbach*              | 1            | Iowa           | Killing ducks in close season                     |
| Breitenbach*              | 2            | Iowa           | Hunting ducks in close season                     |
| Farnham and<br>Birsch     | 1            | North Carolina | Killing geese and brant in excess of bag<br>limit |
| Farnham and<br>Hoagland** | 1            | New York       | Killing ducks in close season                     |



## Migratory Bird Treaty Act Cases Reported to Solicitor for Prosecution. (Cont'd).

| <u>Warden</u> | <u>Cases</u> | <u>State</u> | <u>Violation</u>                                   |
|---------------|--------------|--------------|--|
| Folck*        | 4            | Iowa         | Hunting ducks in close season                      |
| Linebaugh     | 1            | Illinois     | Killing shrike                                     |
| Linebaugh     | 1            | Tennessee    | Killing woodpecker                                 |
| Linebaugh     | 4            | Indiana      | Hunting ducks in close season                      |
| Schulze*      | 1            | Illinois     | Killing ducks in close season                      |
| Shaver        | 1            | Minnesota    | Killing woodpeckers                                |
| Shaver        | 1            | Minnesota    | Killing snipe and hunting grebes                   |
| Shoemaker*    | 1            | Iowa         | Hunting ducks in close season                      |
| and Swanson*  |              |              |  |
| Tonkin        | 1            | Oregon       | Killing swan                                       |
| Visart        | 5            | Arkansas     | Selling ducks                                      |
| Whitehead     | 1            | Georgia      | Killing wood ducks                                 |
| Whitehead     | 5            | Georgia      | Killing doves in close season                      |
| Whitehead     | 22           | Georgia      | Hunting doves prior to half an hour before sunrise |

\* U. S. Deputy Game Warden

\*\* State Deputy Game Warden

## ALASKA INVESTIGATIONS

Ernest P. Walker, who is making a reconnaissance of fur farms along the southern coast of Alaska, accompanied by Frank G. Ashbrook, of the Washington office, is making good progress in the Bureau's power boat, the Sea Otter, having reached Dutch Harbor in the Aleutian Islands Reservation. The two are now working back northeastward, stopping at fur farms located on islands which were not visited on the downward trip.

Wire fencing for the corral to be constructed in connection with the capture of young caribou bulls this fall has been ordered shipped from Seattle to McKinley Park Station. Orders will soon be placed for fencing and other necessary material for the caribou pasture.

According to reports there have been 143,212 muskrat skins shipped from Alaska since December 1, 1921. This is almost as many as were shipped during the entire year of 1919. With reports of such shipments just beginning to be received, the number for the present year probably will reach a large figure.



# ORGANIZATION OF BUREAU OF BIOLOGICAL SURVEY

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# THE SURVEY

Monthly House-Organ of the Bureau of Biological Survey  
United States Department of Agriculture

Vol. 3

Washington, D. C., September 19, 1922.

No. 9

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance to Bureau workers, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended for employees of the Bureau, supplementary to the Departmental house-organ, The Official Record.

## GENERAL NOTES

Doctor Nelson has the sincere sympathy of the Bureau staff and a wide circle of friends in the loss of his mother, Mrs. Nancy M. Brown, whose useful life was ended on August 22 at the advanced age of 91 years.

Prof. A. L. Herrera, one of the foremost biologists of Mexico and Director of Biological Studies of that country, spent part of August in Washington, to learn more of the work of the Government bureaus, particularly the Biological Survey and the Bureau of Entomology. The Office of Biological Studies is developed along the general lines of the Biological Survey. Doctor Nelson and Mr. Goldman, while in Mexico, including Lower California, became acquainted with Prof. Herrera. While in this country Prof. Herrera will visit also some of the larger museums, his visit being for the purpose of furthering cooperation and obtaining information to be used in building up the organization under his control.

Doctor Nelson and Mr. Lawyer attended a conference on oil pollution at Atlantic City, N. J., on August 10 and 11. The pollution of coastal and inland waters through dumping of oil and oil waste was discussed.

The following publication of the Bureau was issued in August: Farmers' Bulletin No. 1238, "Game Laws for 1922," by George A. Lawyer and Frank L. Earnshaw, issued August 17.

Among manuscripts submitted in August for approval for outside publication were the following:

Bailey, Vernon, "Sources of Water Supply for Desert Animals," for Natural History.

Fisher, Dr. A. K., "The Passing of Predatory Animals," for publication by the American International Publishers; "Will the Abolition of the Steel Trap Diminish Pain?" for Farm Journal.



Goldman, E. A., "A New Pocket Mouse from Idaho," for Journal of Mammalogy; "Relation of Forestry and Fire to Wild Animal Life," for Forest and Stream; "Review of Dr. Joseph Grinnell's Geographical Study of the Kangaroo Rats of California," for Journal of Mammalogy.

Lincoln, Frederick C., "Obituary of Herr. H. C. C. Mortensen," for The Auk.

McAtee, W. L., and J. R. Malloch, "Changes in Names of American Rhynchota Chiefly Emesinae," for Proceedings of the Biological Society of Washington.

Malloch, J. R., "Notes on Two Acalyptrate Diptera," for Entomological News.

Melton, Benjamin J., "Killing Prairie Dogs in Oklahoma," for the Oklahoma Agricultural Extension Service.

Nelson, E. W., "Article on Game Conservation," for Field and Stream.

Wetmore, Dr. Alexander, "New Forms of Neotropical Birds," for Journal of the Washington Academy of Sciences.

#### BIOLOGICAL INVESTIGATIONS

During late July and early August, Dr. W. P. Taylor, in collaboration with Dr. H. M. Hall, representing the Carnegie Institution of Washington, made studies in the vicinity of Mather, Yosemite National Park, of the detailed distribution of the higher vertebrates, especially as related to the distribution of plants, of their habits, and of all possible factors affecting them.

Dr. Harry C. Oberholser returned to Washington on August 25, after a five weeks' trip to the Middle West, during which he represented the Bureau at the annual session of the American School of Wild Life Protection, at McGregor, Iowa. He reports that the school is larger and the interest even greater than last year, and that it bids fair to exert an important influence for wild life protection in the future. He also held conferences with several State game officials and bird banding collaborators of the Survey, and reports that the interest in banding is growing rapidly. It is believed that we shall eventually be successful in establishing a series of stations throughout the entire length of the Mississippi Valley, rendering possible a more thorough study of the migrations of the birds using this important flyway.

Frederick C. Lincoln visited Norristown, Pa., on August 31, for the purpose of inspecting a machine that has been designed and built for the manufacture of numbered aluminum bird bands.

Through the cooperation of S. Prentiss Baldwin, the Bureau has received copies of a paper by Dr. Leon J. Cole, the first president of the American Bird Banding Association, entitled "The Early History of Bird Banding in America," which was published in the Wilson Bulletin for June, 1922.

Dr. H. H. T. Jackson is continuing his studies of the distribution of birds, mammals, and amphibians in southern Wisconsin.

Dr. Alexander Wetmore went to Island Lake, Aitkin County, Minn., in August to determine the suitability of an island there as a game preserve. He





will also visit Dawson, N. D., to investigate the status of the breeding wild geese of that region.

### ECONOMIC INVESTIGATIONS

Doctor Fisher left Washington, September 2, for his annual inspection of field operations in the West. In route he will attend a meeting of the International Association of Game Commissioners at Madison, Wis., September 4 and 5. He will also attend a meeting of the National Silver Fox Breeders Association of America on September 6 at Muskegon, Mich., and will confer with Michigan State officials and with J. S. Ligon, in charge of predatory animal work in that State. He will also visit points in this and other States where field operations are in progress.

Frank G. Ashbrook, who has been inspecting fox-farming conditions in Alaska and the Aleutian Islands and conferring with fox breeders, expects to reach Seattle, Wash., about the middle of September. He will then visit points in Minnesota, Wisconsin, and Michigan to make a preliminary survey of conditions bearing upon the selection of a suitable location for an experimental fur farm.

D. D. Green, who has been for some years assistant to W. E. Crouch in the rodent control work of Idaho, has been made leader of the rodent work in Nebraska, this State being established as a separate district, September 1. A. M. Day will continue in charge of the Wyoming district.

Roy Fugate, who has assisted W. E. Crouch under State and temporary Federal appointments, was appointed field aid in biology, effective September 1, and assigned to work in Oregon under the direction of Ira N. Gabrielson.

Frank Reed, who has been employed for some years as assistant predatory animal inspector in the State of Washington, resigned, effective September 1.

Kenneth Pickrell, who was recently appointed junior biologist and assigned as assistant to M. E. Musgrave in the predatory animal work in Arizona, is being transferred temporarily to Michigan. He will have charge of the predatory animal operations during the absence of Mr. Ligon, who will leave Michigan about October 15 for a special assignment in Alaska, where he will assist E. P. Walker, chief fur warden, in establishing methods of controlling wolves and other predatory animals.

An anti-rat campaign was conducted under the direct supervision of the Biological Survey at Bristol, Va.-Tenn., August 7 to 12. In writing of this campaign County Agent H. P. Bird states that everyone says the rat campaign was a great success and that it has meant thousands of dollars to the town already. Mr. Bird says he has not seen a rat since the campaign and has not heard of any damage done by them. A. L. Hays, Secretary of the Chamber of Commerce, states that the campaign was a success in every particular, so successful that it is to be made perpetual.

I. N. Gabrielson and his assistants, in cooperation with local organizations in the city of Portland and vicinity, have launched an extensive cam-



paign against rats. Mr. Gabrielson reports that this work is moving ahead very satisfactorily and promises to yield important results.

Miss Idella Ustrud, who has been employed at the Portland office, has been transferred to Denver, to fill the vacancy caused by the transfer of H. M. Hoyt to the Washington office of the Bureau of Animal Industry.

Miss Florence Ustrud, who has been employed in the Veterans Bureau, has been transferred to the Bureau, effective September 1, and assigned as stenographer and clerk in the office at Billings, Mont.

Miss Adelaide King, formerly employed in the Portland, Ore., office of the Forest Service, was transferred to the Bureau, effective September 1, and assigned as stenographer in the Portland office.

#### FOOD HABITS RESEARCH

Continuing the trip mentioned in the August issue of The Survey, W. L. McAtee spent a few days in consulting collections at the Boston Society of Natural History, and at the Museum of Comparative Zoology and the Gray Herbarium at Cambridge, Mass. En route to Washington, he inspected one tract of duck marsh on Long Island, N. Y.

E. R. Kalmbach has concluded his work in Colorado on pinyon jays in relation to wheat. It was found inadvisable to use poisoned baits in protecting this crop, due to the danger of destroying large numbers of mourning doves, and that efforts to reduce the number of pinyon jays in cultivated fields should be restricted to the season when corn is attacked. A revised leaflet on the matter is available for distribution.

F. P. Metcalf has interrupted his field work in Minnesota for the purpose of surveying ducking waters in the Upper Peninsula of Michigan. A. C. Martin, who was assisting Mr. Metcalf, left the service at the end of August to resume his college work.

#### GAME AND BIRD RESERVATIONS

Smith Riley, in charge of Game and Bird Reservations, is making a tour of inspection of the reservations in the West.

Clyde L. Grow, Superintendent of the Elephant Butte Reservoir, New Mexico, under the Reclamation Service, has been appointed warden of the Rio Grande Bird Reservation, which is within the reclamation project.

Seventy-five buffalo calves are reported born this season at the Bison Range, Mont.; 21 at Wind Cave Preserve, S. Dak., and 5 at Niobrara, Nebr.

An order has been issued by the Secretary of Agriculture permitting hunting of migratory wild fowl on the eastern area of Roosevelt Lake within the Salt River Bird Reservation, Arizona, subject to the provisions of Federal and State





laws, providing that such hunting be done with shotguns not exceeding 10 gauge in size and prohibiting the use of rifles or other firearms shooting ball cartridges anywhere within the reservation.

#### MIGRATORY BIRD TREATY AND LACEY ACTS

Additional information received in the Bureau concerning the unfortunate death of U. S. Game Warden Edgar A. Lindgren is to the effect that on August 13, while performing field work in the vicinity of Big Lake, near Council Bluffs, Iowa, he encountered three Italians (not Greeks, as reported in the August "Survey") - Louis Esposito, Sebastiano Esposito, and Angelo Fili - who were found to be violating the Migratory-Bird Treaty Act and Regulations.

According to information in the possession of the Bureau, which includes a statement made by Mr. Lindgren, confessions of the three Italians, and a special report of investigation of the facts made by B. G. Merrill, it appears that Mr. Lindgren asked the Italians if they had hunting licenses. One of them, Louis Esposito, who had in his pocket a bittern, a bird protected under the regulations, handed his license to Mr. Lindgren, at the same time saying "You make me trouble, you make me trouble." Mr. Lindgren then asked Sebastiano Esposito for his license, but the latter refused to show a license, possibly because he had none.

One of the Italians then fired a shot which passed so close to Mr. Lindgren's face that he thought he had been hit. Mr. Lindgren then drew, or tried to draw, his revolver, whereupon one of the foreigners shot the revolver out of his hand, most of the charge entering the hand, wrist, and forearm. Mr. Lindgren then turned and side-stepped down the railroad embankment, trying to get under cover. It appears that each of the Espositos then fired a shot, one of which hit Mr. Lindgren in the right side and the other in his back. The foreigners then fled. Mr. Lindgren managed to work his way to the Northwestern Railroad tracks, about 350 yards away, where he collapsed and was found by a track-walker and removed to Mercy Hospital, in Council Bluffs. He died on August 17 as a result of the wounds sustained.

In fleeing from the scene, Angelo Fili was shot in the back by one of the other Italians. It is understood that Fili states the shooting was accidental. He also was removed to a hospital in Council Bluffs. Later the other two foreigners were captured by the U. S. Marshal and lodged in jail.

Mr. Lindgren was 22 years of age and married, having a wife and one child about 15 months old. He lived with his family in Chicago, Ill., until about July 13, 1922, at which time he was appointed to the position of U. S. game warden and assigned the Iowa district with headquarters at Council Bluffs. He also held the position of honorary deputy warden for the State of Iowa. Prior to his appointment as U. S. game warden he had been associated with the Bureau in the capacity of U. S. deputy game warden. While occupying the position of deputy, Mr. Lindgren frequently was assigned to active duty in the vicinity of Chicago and along the Illinois River. He was known as a capable and efficient warden, and had the reputation of being cool and collected in trying circumstances, never quarrelsome, but always avoiding trouble.

Mr. Lawyer left Washington on September 2 to attend and address the annual convention of the International Association of Game, Fish, and Conservation Com-





missioners held in Madison, Wis., September 4 and 5. At the conclusion of the meeting he will proceed to points in the West. His itinerary includes the Salt Lake marshes in Utah, where numbers of wild fowl are reported to be dying from alkali poisoning.

In an order issued July 25, 1922, the Secretary granted permission to the members of the State Conservation Commission of Wisconsin, the Secretary of the Commission, and its regular full-salaried employees to kill by shooting great blue herons at any time on waters within that State. This permission was granted because of the fact that blue herons have been found to be seriously injurious to and destructive of game fishes in Wisconsin. The order provides that every bird killed thereunder, and every part thereof, shall be totally destroyed as promptly as possible and shall not be possessed, transported, or shipped in any manner except for the purpose of destruction in the immediate vicinity where the bird was killed, provided, however, that blue herons killed under the order, or parts thereof, may be shipped or transported as a gift, but not for sale, to public museums and public scientific and educational institutions.

From the annual reports which are being received from U. S. deputy game wardens covering their observations and activities for the fiscal year ended June 30, it is again apparent that the numbers of migratory birds, especially waterfowl and certain insectivorous birds, are still greatly on the increase. Most of the deputies attribute this condition to the protection afforded during recent years by the Migratory-Bird Treaty Act.

Miss Helen Miner, stenographer in this division since 1919, was transferred to the Civil Service Commission on September 5.

Otis J. Trenis, of Washington, D. C., was appointed U. S. game warden, effective August 13. His territory includes the District of Columbia and adjacent portions of Maryland and Virginia.

Theodore N. Cottrell, 3511 Underwood Ave., Birmingham, Ala., was appointed U. S. deputy game warden, effective September 1, 1922.

Appointments of the following U. S. deputy game wardens were terminated during the month of August:

Asberry J. Payne, Camp A. A. Humphries, Va.  
Peter Scott, Bottineau, N. Dak.  
Henry W. Lewis, 2106 Carlton Ave., Nashville, Tenn.  
Robt. H. Caldwell, Hornbeak, Tenn.  
George L. Lane, Portland, Tenn.  
Millet S. Clancy, Santa Fe, N. Mex.  
Edwin Jennings, Savanna, Ill.  
Thomas E. Dennis, Monroeville, Ala.



## Migratory Bird Treaty Act Cases Terminated - Reports received during August.

| <u>Warden</u>        | <u>Cases</u> | <u>State</u> | <u>Violation</u>                             | <u>Fine</u>    |
|----------------------|--------------|--------------|--|----------------|
| Charlton             | 1            | Ohio         | Offering to sell goose                       | \$5            |
| Farnham and Hilliard | 4            | Pa.          | Killing wood ducks                           | \$10 each      |
| Farnham              | 1            | Pa.          | Possessing wood duck                         | \$10           |
| Farnham              | 1            | Pa.          | Killing great blue heron                     | \$10           |
| Hilliard             | 1            | N. J.        | Hunting ducks after sunset                   | \$20           |
| Hilliard             | 1            | N. J.        | Killing knot                                 | \$10           |
| Hilliard             | 4            | N. J.        | Hunting ducks after sunset                   | \$5 each       |
| Hilliard             | 2            | N. J.        | Hunting ducks after sunset                   | \$25 each      |
| Hilliard             | 2            | N. J.        | Killing wood ducks                           | \$10 each      |
| Holmes               | 1            | Neb.         | Hunting ducks in close season                | \$10           |
| Holmes               | 1            | Neb.         | Killing goose in close season                | \$10           |
| Kelsey               | 1            | S. D.        | Hunting ducks after sunset                   | \$100          |
| Kelsey               | 2            | S. D.        | Hunting ducks after sunset                   | \$50 each      |
| Kelsey               | 3            | S. D.        | Hunting ducks after sunset                   | \$25 each      |
| Kelsey               | 1            | S. D.        | Killing and possessing swan                  | \$20           |
| Kelsey               | 1            | S. D.        | Hunting ducks after sunset                   | \$1            |
| Linebaugh            | 1            | Tenn.        | Hunting doves in close season                | \$10 and costs |
| Oberhaus*            | 1            | Ala.         | Offering to sell feathers of coots and ducks | \$2.50         |
| Shaver               | 1            | Minn.        | Possessing part of gull                      | \$20           |
| Shaver               | 1            | Wis.         | Hunting ducks after sunset                   | \$10           |
| Shupee               | 1            | Texas        | Offering to sell aigrettes                   | \$1            |
| Steele               | 1            | Wash.        | Possessing ducks in storage in close season  | \$20           |
| Steele               | 1            | Wash.        | Possessing swan                              | \$1            |
| Steele               | 1            | Wash.        | Hunting ducks after sunset                   | \$25           |
| Steele               | 1            | Wash.        | Hunting ducks after sunset                   | \$10           |
| Steele               | 1            | Wash.        | Operating without taxidermist permit         | \$25           |

## Migratory Bird Treaty Act Cases Reported to Solicitor for Prosecution.

| <u>Warden</u> | <u>Cases</u> | <u>State</u> | <u>Violation</u>              |
|---------------|--------------|--------------|-------------------------------|
| Barmeier      | 2            | Missouri     | Possessing wood ducks         |
| Barmeier      | 1            | Missouri     | Selling coot and rail         |
| Bloxsom       | 2            | Virginia     | Killing curlew and terns      |
| Bloxsom       | 2            | Virginia     | Killing sandpipers            |
| Bloxsom       | 2            | Maryland     | Killing sandpipers            |
| Hoffman       | 2            | Alabama      | Hunting doves in close season |
| Holmes        | 2            | Nebraska     | Killing ducks in close season |

\* U. S. Deputy Game Warden.





| <u>Warden</u>       | <u>Cases</u> | <u>State</u> | <u>Violation</u>                          |
|---------------------|--------------|--------------|---|
| Lindgren**          | 1            | Illinois     | Killing shrike                            |
| Lindgren**          | 1            | Iowa         | Killing doves in close season             |
| Merrill             | 1            | Illinois     | Illegal interstate shipment of partridges |
| Shaver and<br>Daye* | 1            | Minnesota    | Hunting ducks after sunset                |
| Shaver              | 1            | Wisconsin    | Possessing wood ducks                     |
| Whitehead           | 3            | So. Carolina | Killing wood ducks                        |

\* U. S. Deputy Game Warden.

\*\*Deceased

### ALASKA INVESTIGATIONS

H. W. Johnston, field assistant and deputy fur warden stationed at Nome, who has been spending the summer studying the grazing and range plants at the Great Basin Experiment Station, Utah, and the Jornada Range Reserve, New Mexico, was called to Washington for a short conference with the Chief of Bureau in August. He will return to Alaska this month.

Adolph Murie, of Moorhead, Minn., was appointed field assistant on August 3, to assist in the capture and care of young caribou bulls to be taken in the Mount McKinley National Park this fall and placed in a corral in the park.

The Blue Fox Farmers' Association of South Central Alaska was organized at Cordova on July 24 as a result of the visit of Messrs. Walker and Ashbrook to that section of the Territory. This is the first fox-farming organization in Alaska, and it is expected that a similar one, comprised of fox farmers in southeastern Alaska, will be perfected.

Chowiet Island, one of the Semidi group of islands under the jurisdiction of the Bureau, has been leased for fox-farming purposes for three years to Iver Wallin, of Chignik, who will stock the island with blue foxes this fall.

Five permits for the use of islands within the Aleutian Islands Reservation were issued for fox-farming purposes during August, two of them to the newly organized Aleutian Fur Company. The islands for which permits were issued comprised Expedition, Semisopochnoi, Little Sitkin, Amatignak, and Tanaga. All will be stocked with blue foxes.

The first permit to capture live lynxes for propagating purposes has been issued to Louis Bell, of Seward. In his application for the permit Mr. Bell says he believes he can propagate these animals successfully for their fur. The pelt of a lynx is valued at about \$25.

The appointment of Frank Cassell as deputy fur warden at Akutan was terminated September 1, when he severed his connection with the Bureau of Education.



# THE SURVEY

Monthly House-Organ of the Bureau of Biological Survey  
United States Department of Agriculture

Vol. 3

Washington, D. C., October 12, 1922.

No. 10

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance to Bureau workers, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended for employees of the Bureau, supplementary to the Departmental house-organ, The Official Record.

## GENERAL NOTES

Doctor Nelson left Washington on October 8 for his annual western inspection trip, which will cover several weeks. During this time he will meet State game officials at Seattle, Wash., to discuss State campaigns being waged for the extermination of sea-lions and seals along the coast, as they affect animals living on bird reservations under the jurisdiction of the Department. He will be met at Seattle by E. P. Walker, chief fur warden of Alaska, for the purpose of going over matters relative to the development of the Bureau's activities in the Territory. While in Oregon he will confer with State officials regarding the settlement of the long controversy over the title to lands within the Malheur Lake Bird Reservation. In California he will meet with State officials and others cooperating in the economic work of the Bureau. On his return trip he will visit several of the field stations of the Bureau.

The Biological Survey was well represented at a special open meeting of the Biological Society of Washington, held in the auditorium of the Interior Department building on September 29, the attraction being a lecture illustrated with motion pictures of moose, deer, and other native game animals and birds of New Brunswick, by Donald R. Dickey, of California. The pictures were beautiful and extraordinary in many particulars, possibly the most remarkable feature aside from the sustained interest being the slow analysis of the rapid movements of the game. The views are the result of Mr. Dickey's work of the past ten seasons in photographing wild animals in New Brunswick, and were here shown for the first time.

The following publications of the Bureau were issued in September:





Farmers' Bulletin No. 1293, "Laws Relating to Fur Animals, 1922," by George A. Lawyer and Frank L. Earnshaw, received September 1.

S. R. A. No. 47, "Hunting of Wild Fowl on Salt River Reservation, Ariz." Department Circular No. 242, "Directory of Officials and Organizations Concerned with the Protection of Birds and Game, 1922," by George A. Lawyer and Frank L. Earnshaw.

Department Bulletin No. 1089, "Reindeer in Alaska," by Seymour Hadwen and Lawrence J. Palmer.

Among manuscripts submitted in September for approval for outside publication were the following:

Bailey, Vernon, "The Friendly Porcupine," for Journal of Mammalogy.

Kellogg, Remington, "Description of a New Genus and Species of Whalebone Whale from the Calvert Cliffs, Maryland," and "A Fossil Porpoise from the Calvert Formation of Maryland," for Proceedings of the United States National Museum.

Malloch, J. R., "A New North American Species of the Genus Beckerina (Phoridae, Diptera)," for Bulletin of the Brooklyn Entomological Society.

Nelson, E. W., "Experimental Fur Farm Discovers Breeding Season of Martens," for American Fox and Fur Farmer.

Taylor, W. P., "Notes on the Sense of Smell in the Golden Eagle and Certain Other Birds," "The Hepburn Rosy Finch in the Olympic Mountains, Washington," and "Unusual Shelter of Some Hepburn Leucostictes in Winter," for The Condor.

Viereck, Henry L., "Descriptions of Some Species of Andrena, Chiefly from New England and Collected by C. W. Johnson," for Occasional Papers of the Boston Society of Natural History.

### BIOLOGICAL INVESTIGATIONS

In response to a request received from New South Wales, for assistance in laying the foundation for a thorough biological survey of Australia, the bureau has furnished a concrete outline of its methods of work and representative publications resulting from its explorations and investigations, together with sample traps, labels, and bird bands, and information regarding card records, reports, distributional maps, methods of filing, the preparation of scientific specimens, and the construction of museum cases. Attention was called to the value of such fundamental knowledge in formulating measures for the control of bird and mammal pests, in the protection of birds and game, and in the enforcement of laws affecting wild life. The object of the contemplated survey is to obtain definite information regarding the peculiar fauna before it is exterminated or further modified by civilization.

E. A. Goldman left Washington on September 17 for a trip of several weeks' duration. His first stops were at Salt Lake City and Kanab, Utah, where he had conferences with officials of the Forest Service relative to game conditions on the national forests, with special reference to certain areas in Arizona. At last accounts he had left for the Kaibab Plateau, in company with Forest Service officials, for an examination of that area.



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DATE: 1971 1000000

The following information was obtained from the records of the Department of Social Services, New York City, regarding the case of [redacted] who was born on [redacted] at [redacted]. The subject's mother is [redacted] and his father is [redacted]. The subject has been placed under the supervision of the Department since [redacted].

[The remainder of the document contains several paragraphs of text that are mostly illegible due to extreme blurring and poor scan quality. The text appears to be a report or record detailing the subject's history and current status.]

Vernon Bailey is continuing his studies of living rodents, especially of the breeding habits of meadow mice, which prove amazingly prolific and voracious in captivity. Besides eating their own weight in green food every 24 hours, they have no scruples against cannibalism, and were it not for their habit of eating each other's young when crowded, they would soon fill a good sized room to overflowing. The family of young banner-tailed kangaroo rats born in June are now fully grown and indistinguishable from the adults. Besides three species of kangaroo rats, Mr. Bailey is keeping under observation pocket mice, meadow mice, and grasshopper, white-footed, and jumping mice, all of which are affording good life-history information.

F. C. Lincoln left Washington on September 27 for Browning, Ill., for the purpose of banding ducks on the grounds of the Sangamo Club, where he was so successful in this respect in March. His itinerary included Cleveland and Chicago, where he stopped to confer with various people in connection with the general project.

H. H. T. Jackson has completed the season's field work in Wisconsin and is now visiting certain of the larger museums in the Middle West, where he is examining specimens of shrews in connection with his studies of these animals.

T. H. Scheffer was engaged during September in conducting field investigations in the life histories of rodents, especially pocket gophers, pocket mice, and beavers, with special reference to their destructive habits.

#### ECONOMIC INVESTIGATIONS

Doctor Fisher is continuing his western trip to inspect field work and to consult with field representatives and cooperators. He has already visited points in Michigan, North Dakota, Montana, South Dakota, Colorado, Wyoming, Utah, and Idaho, and reports conditions generally very favorable and work moving ahead satisfactorily with good support from cooperators.

F. G. Ashbrook has returned from his trip to Alaska and is engaged in studying the fur farming situation in Minnesota, Wisconsin, and Michigan, enroute to Washington. He is now in Chicago and is expected to reach Washington in the near future.

J. S. Ligon will conduct special investigations and demonstrations relative to the control of wolves in Alaska during the fall and early winter. He will leave Michigan about the middle of October for Seattle, where he will confer with Doctor Nelson and join Ernest P. Walker, chief game and fur warden, in continuing the trip to Alaska. Kenneth Pickrell, formerly of the Arizona District, will have charge of the Michigan work during Mr. Ligon's absence.

Carlyle Carr has been transferred from the Land Classification Division, of the Geological Survey, as junior biologist and assigned as assistant to James Silver in handling rodent control work in the Eastern States. Mr. Carr



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assumed duty October 2, and he and Mr. Silver are now making demonstrations and experiments in the control of pine mice and other rodents in the vicinity of Winchester, Va. They will be engaged upon this work during the month of October.

Charles G. Poole is to be congratulated upon the prosecution of a trap thief who was fined \$100 and given a jail sentence of 6 months. A few cases such as this, given suitable publicity, should exert a most helpful influence in correcting this seriously troublesome feature in the predatory animal operations.

Miss Lorens Randall, formerly a clerk in the Bureau of Agricultural Economics, was transferred to this Division on October 1.

#### FOOD HABITS RESEARCH.

E. R. Kalmbach is now engaged in experimental work in the laboratories of the Chemical Warfare Service, at Edgewood Arsenal, Md., with the object of determining whether the use of any of the toxic gases promises to be feasible in the control of injurious birds.

Charles O. Handley, of Washington and Lee University, and Raymond B. Cowles, of Cornell, temporarily employed during the summer, have returned to college work.

Charles C. Sperry and F. P. Metcalf are continuing their surveys of wild-fowl feeding grounds in Montana and Minnesota, respectively.

#### GAME AND BIRD RESERVATIONS

On September 29, the President signed an Executive Order creating the Flat Creek Bird Reservation in Wyoming. This reservation adjoins the Elk Refuge, at Jackson Hole.

D. C. Nowlin, in charge of the Elk Refuge, reports that the total hay crop there this season amounts to 686 tons.

George M. Riddick, of the Big Lake Reservation, Ark., assisted by L. L. Bryan and William R. Overton, completed a survey of the boundary of the reservation on September 13.

Paul Kroegel, of the Pelican Island Reservation, Fla., states that the birds which arrived on August 14 started nesting at once and the first eggs were laid on August 25, the first young hatching September 26. The birds continued to come to the reservation during September and on the 30th of the month about 2,000 were there.







## MIGRATORY BIRD TREATY AND LACEY ACTS

Mr. Lawyer is on an extended administrative trip, and will visit Idaho and the coast States before returning to Washington.

Talbot Denmead attended the meeting of the Wild Life Conservation Conference held at Montgomery, Ala., September 13 and 14. He addressed the conference on the value of a paid game warden service in Alabama and also dealt with the relation of the Federal regulations to the State laws. He reports a very enthusiastic meeting.

We regret to learn of the death on October 2 of George S. Wilson, a U. S. deputy game warden in Montgomery, Ala., who was shot by a negro suspected of being implicated in the killing of a policeman. At the time Mr. Wilson was shot he was assisting some of the deputy sheriffs of Montgomery, one of whom was also shot in the arm.

Special credit is due Warden Smith of Maine, for excellent work performed on September 16 and 17 in apprehending 18 persons who had violated the Migratory Bird Treaty Act in the shooting and killing of wood ducks. Mr. Smith secured all 18 cases without any assistance.

The following appointments were made to the position of U. S. deputy game warden during September:

Harold E. Meads, c/o State Game Commission, Portland, Oregon.  
 Frank L. Hard, 1026 Briar Ave., Washington C. H., Ohio.  
 William D. Duncan, Clarksville, Tex.  
 Geo. S. Wilson, 1136 S. Decatur St., Montgomery, Ala.  
 Albert E. Classon, 396 Water St., Ellsworth, Me.  
 Harold L. Soderlund, 33 E. 111th Place, Chicago, Ill.

Appointments of the following U. S. deputy game wardens were terminated during September:

Manfred K. Groom, Forsyth, Mo.  
 Seymour R. Ingersoll, Ballston Spa, N. Y.  
 Charles Daniel, Dearborn, Mich.  
 Otto Rohn, 206 Glen Ave., Ann Arbor, Mich.

## Migratory Bird Treaty Act cases reported to Solicitor for Prosecution.

| <u>Warden</u> | <u>Cases</u> | <u>State</u>  | <u>Violation</u>                                   |
|---------------|--------------|---------------|--|
| Andersen*     | 3            | Minnesota     | Hunting ducks prior to half an hour before sunrise |
| Babson*       | 2            | Massachusetts | Killing jacksnipe in close season                  |
| Barmeier      | 1            | Missouri      | Possessing parts of herons and loons               |
| Birsch        | 1            | Virginia      | Killing duck in close season                       |
| Birsch        | 1            | Virginia      | Killing jacksnipe in close season                  |



## Migratory Bird Treaty Act cases reported to Solicitor for Prosecution.

| <u>Warden</u>         | <u>Cases</u> | <u>State</u>  | <u>Violation</u>                          |
|-----------------------|--------------|---------------|---|
| Birsch                | 1            | N. Carolina   | Killing herons and bitterns               |
| Bloxson               | 3            | Maryland      | Killing sandpipers                        |
| Bloxson               | 5            | Maryland      | Killing willets, knots, and sandpipers    |
| Charlton              | 2            | Ohio          | Killing martins                           |
| Farnham               | 1            | New York      | Killing yellowlegs in excess of bag limit |
| Heap**                | 2            | Nevada        | Possessing doves in close season          |
| Hoffman               | 3            | Alabama       | Killing doves in close season             |
| Holmes                | 4            | Kansas        | Killing ducks in close season             |
| Lowe* and Steele*     | 1            | Massachusetts | Killing sandpipers                        |
| Oliphant*             | 1            | Virginia      | Killing sandpipers and willet             |
| Shaver                | 1            | Minnesota     | Possessing wood duck and loon             |
| Shaver                | 3            | Minnesota     | Hunting ducks after sunset                |
| Shaver and Bridges**  | 2            | Minnesota     | Hunting ducks after sunset                |
| Shaver                | 1            | Minnesota     | Killing pileated woodpecker               |
| Smith                 | 2            | Maine         | Killing sandpipers                        |
| Smith                 | 18           | Maine         | Killing wood ducks                        |
| Stadlmeir             | 4            | Massachusetts | Killing sandpipers                        |
| Steele                | 3            | Washington    | Killing band-tailed pigeons               |
| Steele                | 2            | Washington    | Killing ducks in close season             |
| Whitehead and Cannon* | 12           | Georgia       | Hunting doves in close season             |
| Whitehead             | 8            | Georgia       | Killing doves in close season             |

\* U. S. Deputy Game Warden

\*\* State deputy game warden

## Migratory Bird Treaty Act Cases Terminated - Reports received during September.

| <u>Warden</u> | <u>Cases</u> | <u>State</u> | <u>Violation</u>                   | <u>Fine</u>                     |
|---------------|--------------|--------------|------------------------------------|---------------------------------|
| Andersen**    | 1            | Nevada       | Killing killdeer and gulls         | \$3                             |
| Barmeier      | 1            | Missouri     | Killed duck in close season        | \$50; stay of execution granted |
| Bloxson       | 1            | Virginia     | Killing nighthawks (bull-bats)     | \$5                             |
| Bloxson       | 3            | Delaware     | Killing black-crowned night herons | \$1 each                        |
| Charlton      | 1            | Ohio         | Killing loon                       | \$25 and costs of \$11.65       |
| Sans***       | 1            | Nevada       | Killing doves in close season      | \$20                            |

\*\* Deputy State Game Warden

\*\*\* Bureau employee



## ALASKA INVESTIGATIONS

Harry G. Seller, deputy fur warden, who has been stationed at Tyonic, returned to duty on September 18, with headquarters changed to Anchorage. Since July Mr. Sellers has been confined in a hospital at Seattle, Wash., where he underwent an operation. He reports that he has fully recovered.

Donald H. Stevenson, warden at Unalaska, will leave on the 16th for Unimak Island, to continue investigations for two months of bird and animal life there.

There promises to be a wide demand for Department Bulletin No. 1039, "Reindeer in Alaska," received September 30, and containing the first information of its kind ever published.

E. P. Walker, chief fur warden, is at Seattle, Wash., for a few weeks in connection with Alaska matters. He will have a conference with Doctor Nelson before returning to Juneau.

Owing to unusual weather conditions for this season of the year, which caused the caribou to leave their summer range sooner than usual, the attempt to capture the young bulls, as planned by Olaus J. Murie in the Mount McKinley Park region, was abandoned for the winter. The corral has been completed, however, and everything is in readiness for capturing the animals when they return next spring.

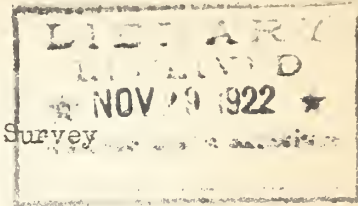
Doctor Seymour Hadwen, reindeer expert, has about completed his investigations of the reindeer industry in northern Europe and plans to return to Cambridge, England, after making an inspection of Norwegian-owned herds near Valdres, central Norway. Reports thus far received from Doctor Hadwen contain material very interesting in its application to the industry in Alaska.





# THE SURVEY

Monthly House-Organ of the Bureau of Biological Survey  
United States Department of Agriculture



Vol. 3

Washington, D. C., November 22, 1922.

No. 11.

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance to Bureau workers, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended for employees of the Bureau, supplementary to the Departmental house-organ, The Official Record.

## GENERAL NOTES

Doctor Nelson, who has been visiting various field stations of the Bureau during the last few weeks, returned to his office on November 18. While at Portland, Oregon, he had a conference with the representatives of the Bureau and of the State Land Office concerning the future of the Malheur Bird Reservation. There appears to be every reason to believe that the future of this splendid breeding ground for wild fowl will be assured. Doctor Nelson, before leaving Washington, had arranged to meet E. P. Walker, Chief Fur Warden, who came from his station, Juneau, Alaska, for a conference concerning Alaskan matters. J. Stokley Ligon, Predatory Animal Inspector, joined the party and returned to Alaska with Mr. Walker. He will spend the next two months investigating the possibility of destroying wolves on islands in Southeastern Alaska where they are exceedingly destructive to deer.

E. J. Thompson, assistant in operations, returned to Washington, November 18, after visiting field offices of the Bureau in Nebraska, South Dakota, Wyoming, Kansas, Oklahoma, and Texas, with a view to systematizing the business methods of these offices, including the handling of accounts, property, and correspondence.

At the annual meeting of the American Ornithologists' Union in Chicago, Ill., October 23-26, the Biological Survey was represented by the following members: Miss M. T. Cooke, F. C. Lincoln, W. L. Moltee, Dr. H. C. Oberholser, and Dr. T. S. Palmer. This meeting, the fortieth in the history of the Union, was the first ever held in the Middle West and was one of the most successful.



About forty papers were presented on the program, the following by members of the Biological Survey: "The Farallones," by W. L. McAtee; "The Great Plains as a Breeding Ground for Waterfowl," by Dr. H. C. Oberholser; "Selection of Birds for Banding," by F. C. Lincoln; and "What Can Be Learned From a Bird Census," by Miss May T. Cooke. More than 270 new members of all classes were elected, the single vacancy in the list of Fellows being filled by the election of Dr. A. A. Allen, of Ithaca, N. Y. One of the five members elected was Tracy I. Storer, of Berkeley, Calif., an inspector of foreign birds of the Biological Survey. Six corresponding Fellows and about 265 associates were also chosen. All officers were re-elected for the ensuing year. Doctor Palmer is the Secretary and Mr. McAtee is treasurer.

Among the moving pictures shown was a film furnished by the Biological Survey, illustrating bird life on the Farallon Islands, California, and in the exhibit of paintings and photographs of birds were a number from the files of the Survey.

W. Roy Dillon, of the Migratory Bird Division, and Roland E. Nairn, of the Accounting Office, have been receiving congratulations on the birth of sons. W. Roy Dillon, Jr., arrived on October 22, and Branson Kay Nairn, on October 31.

The following publications of the Bureau were issued in October:

Department Bulletin No. 1078, "Beaver Habits, Beaver Control, and Possibilities in Beaver Farming," by Vernon Bailey. (Received, November 10.)

S. R. A. No. 48, "Migratory Bird Treaty, Act, and Regulations." (Issued, September 30; received, October 11.)

S. R. A. No. 49, "Importation of Quail from Northeastern Mexico."

Farmers' Bulletin No. 702, revised, "Cottontail Rabbits in Relation to Trees and Farm Crops," by D. E. Lantz. (Issued, September; received, October 19.)

Among manuscripts submitted in October for approval for outside publication were the following:

Malloch, J. R., "Notes on Clusioididae (Diptera)," for Occasional Papers of the Boston Society of Natural History.

Taylor, Dr. W. P., "Doctor Suckley on the Magpie Versus Livestock," "The Eastern Kingbird in Western Washington," and "The Barn Owl in Washington State," for the Auk.

## BIOLOGICAL INVESTIGATIONS

E. A. Goldman completed an examination of certain areas on the Kaibab Plateau, with special reference to the condition of the deer, in cooperation with the Forest Service, about October 10. Later he covered parts of the northwestern part of Arizona, completing an examination of that section necessary to a better understanding of the life zones of the State. On October 26 he met W. P. Taylor at Grand Canyon, and the two made an examination of various experimental plots which have been maintained in that section for the past several years to measure the effect of rodent infestation on the range. In the main, these experiments were found to be progressing satisfactorily.





From October 31 to November 4, Dr. Alexander Wetmore was in southern Pennsylvania studying the status of the Texas bobwhite, introduced locally in considerable numbers under the name of Mexican quail. The introduced birds seemed to have done well, and quail were as common as could be expected in a region where hunting is extensive. Specimens taken included some of the original native stock, as well as a number that are crosses between the native and introduced forms. The work was done in cooperation with the Secretary of the Pennsylvania Game Commission.

F. C. Lincoln has been in the field since September 28 experimenting in methods for banding waterfowl. Through the courtesy of the members of the Sanganois Hunting Club, on the Illinois River, near Browning, Ill., Mr. Lincoln has been enabled to carry on his investigation on the hunting preserve of this club. He reports an unusually dry season, however, and a scarcity of ducks up to the present time.

T. H. Scheffer is conducting an investigation of pocket mice near Lind, Wash., where, contrary to the usual habits of these rodents, they seem to have developed destructive habits.

A. B. Howell, well-known zoologist, has come from his home in Pasadena, California, to spend the winter in Washington for the purpose of studying the Biological Survey collection of mammals with a view to possibly monographing one or more groups.

#### ECONOMIC INVESTIGATIONS

Dr. Fisher has continued his western inspection trip through North and South Dakota, Montana, Wyoming, Colorado, Utah, Idaho, Washington, Oregon, California, Nevada, Arizona, New Mexico, and Texas and reached Washington, D. C., on November 16.

Frank G. Ashbrook returned to Washington on October 16 after making a most successful trip to study fox farming conditions in Alaska, particularly in the Aleutian Islands. On his return he visited points in Minnesota, Wisconsin, and Michigan to confer with State officials and others engaged in raising foxes. He also attended the meeting of the American Silver Fox Breeders' Association held at Boston, October 20, and gave a general talk on blue fox farming in Alaska.

Dr. H. L. VanVolkenberg, of the Experimental Fur Farm, visited the ranch of Geo. S. Tuttle, South Ryegate, Vt., October 10, with a view to obtaining information in connection with the study of diseases to which silver foxes are subject, an important feature of investigations now in progress at the farm at Keeseville, N. Y.

Dr. Earl T. Martin resigned as predatory animal inspector, October 20, and his resignation has been accepted. Since July he has been stationed in the Arizona District, having previously served in New Mexico.



Reports from the field indicate that organized poisoning operations will be in full progress by the middle of November and that this phase of the field operations will be conducted on a far larger scale than during any previous year. Advance preparations for the work have likewise been more complete, and large quantities of bait material have been promised by cooperating stockmen. Under these circumstances the poisoning campaigns during the coming winter should be much more carefully planned, more extended in scope, and of greater effectiveness than during any previous year.

James Silver and Carlyle Carr have been engaged in studying the habits and depredations of pine mice and conducting field tests with a view to determining more effective methods of combating these animals under orcharding conditions in the vicinity of Winchester, Va. Vernon Bailey also spent a few days with them for the purpose of gaining information relative to the habits and distribution of the pine mice. Important progress has been made in this work and definite improvements in poisoning procedure have been devised.

Otto Stephi, formerly of the Geological Survey, Department of the Interior, has been transferred, effective November 1, as biological assistant, in rodent control work in Montana, where he will assist A. E. Oman in the organization and conduct of field operations. Mr. Stephi has had previous experience in the rodent work of the Bureau, having been employed for a time in Idaho.

Many reports have been received regarding the exhibit of the Department at State fairs and the supplemental material provided by the various district leaders in this connection. It is evident that there was a great deal of interest evinced by the public in these displays and that they afforded opportunity to further the interests of the cooperative work in which the Bureau is engaged in the control of rodents and predatory animals.

#### FOOD HABITS RESEARCH

W. L. McAtee delivered an address on the work of the Biological Survey, at the Indiana University, on November 1.

After completion of a survey of the duck food resources of Montana lakes, C. C. Sperry spent a short time at Pyramid Lake, Nevada, investigating complaints of damage to food fishes by pelicans. On his return eastward he visited relatives and friends in Colorado and Kansas.

F. P. Metcalf, also having closed his season's work studying the aquatic plants of Minnesota and Michigan lakes, spent a few days' leave in Indiana.

E. R. Kalmbach has returned after six weeks' work at the Edgewood, Md., arsenal of the Chemical Warfare Service. Experiments were carried out for the purpose of learning whether any of the war gases could be used as



bird-control agencies. Laboratory work showed that birds have much greater powers of resistance to the action of some of these gases than was supposed. In only a few cases were concentrations equivalent to one-fourth of the lethal dose for man effective, while, with one of the deadly war gases, concentrations practically equal to the lethal human dose were needed. English sparrows and pigeons were used.

#### GAME AND BIRD RESERVATIONS

Smith Riley, In Charge of Game and Bird Reservations, returned on October 30 from a trip to various reservations in the West and Northwest, where he has been familiarizing himself with conditions and taking up administrative problems with the local officers. The following reservations were visited: Belle Fourche, S. Dak.; Anaho Island, Nev.; Clear Lake, Calif.; Klamath Lake, Oreg.; Minidoka, Idaho; Nine Pipe and Pablo, Mont.; the Montana National Bison Range; Wind Cave Game Preserve, S. Dak.; the Elk Refuge, Wyo.; and Niobrara Reservation, Nebr. Mr. Riley is of the opinion that, as the animals have increased so satisfactorily, it is now time to consider administrative plans providing for the utilization of the different kinds of animals on hand and the determination of the conditions of locality in relation to the kinds of animals the areas are best suited to produce. That the annual turn-off from these areas be used for planting purposes appears most advisable. There are no areas of open range left in this country which can be devoted to production of buffalo, so that probably animals of this species available for disposition can best be used for exhibit purposes or for production in inclosures.

Merrill C. Marvin, an employee of the Reclamation Service, has been appointed warden at the Willow Creek Reservation, Mont., to assist the Bureau in protecting the birds at that refuge.

William E. Brooks has been appointed warden of the Dungeness Spit Reservation, Wash., during the present hunting season. Neil Gelant, who has served as warden of that reservation for a number of years, has been furloughed on account of illness.

Charles M. Conger, cooperative warden at the Conconully Reservation, Wash., advises that there is a large increase of ruffed grouse at the refuge.

William Jenkin, Warden of Chase Lake Reservation, N. Dak., states that northern ducks are at the reservation in large numbers and that grouse are also plentiful.

The birth of two buffalo calves was reported during the past month - one at Wind Cave Preserve and one at Sullys Hill Preserve. This makes a total of 104 buffalo calves born this season on the four preserves: National Bison Range, Niobrara Reservation, Wind Cave, and Sullys Hill. The death of only one of these has been reported - one of the calves at Sullys Hill.



1861-1862

1861-1862

1861-1862

1861-1862

1861-1862

At Sullys Hill Preserve, the following improvements were completed during the summer: A fence about Sweetwater Lake, a women's rest house, and a new entrance and approach to the park. With the completion of the fence around the lake, the picnic grounds have been enlarged, which will add considerably to the enjoyment of visitors to the preserve.

An order issued by the Secretary on October 16 requires that the trapping of fur-bearing animals on Big Lake Reservation, Ark., be allowed only under permit issued by the Chief of this Bureau, and trappers will not be permitted to visit their traps before sunrise or after sunset. It is believed that this requirement will prevent disturbance of the birds on the refuge.

#### MIGRATORY BIRD TREATY AND LACEY ACTS

Mr. Lawyer is spending the month of November in official work in Washington, Oregon, Montana, and California.

A possible record for the quick handling of migratory-bird treaty-act cases was established by T. T. Bloxson, at Wilmington, Del., October 28 to 30. On Saturday night, October 28, Warden Bloxson apprehended 13 men who were shooting after sunset on one of the marshes south of Wilmington, disarmed them, and conducted them to the nearest railroad station where they were identified to his satisfaction. They promised to appear before the U. S. District Attorney in Wilmington at 10 o'clock Monday, October 30. Mr. Bloxson performed the work single handed, with the exception of carrying the guns which he seized; for assistance in this detail it was necessary to secure the services of two outsiders. The 13 violators appeared at the time designated, were carried immediately into the U. S. Court by the District Attorney, and all pleaded guilty and were fined. Apprehending so many violators at night, especially among the foreign element, to which class 7 of the 13 violators belonged, is not a particularly easy proceeding and Warden Bloxson is to be congratulated.

Warden Smith, of Maine, recently had the unusual experience of apprehending 3 violators of the migratory-bird treaty act, who immediately before their arrest were rescued by the warden from a sinking canoe. The violators, possibly in their excitement at being caught, accidentally discharged one of their shotguns, blowing a hole in the bottom of the canoe.

The following appointments were made to the position of U. S. deputy game warden during October.

James F. McMahon, Box 94, Baraga, Mich.

Walter C. Clark, 3700 Washington St., Vicksburg, Miss.

Charles A. Higgins, 28 Washburn Ave., Rumford, R. I.

James D. Chamberlin, 1114 North St., Lafayette, Ind.

Julius E. Yanch, 2903 Chartress St., Houston, Tex.



Horace G. Rowland, Dexter, Ga.

George Thompson, Gridley, Calif.

Robert H. Stirling, c/o Dept. of Conservation, New Orleans, La.

The appointment as U. S. deputy game warden of Hugh H. Lewis, Jr., 1616 Hemphill St., Fort Worth, Tex., was terminated during October.

Migratory Bird Treaty Act cases reported to Solicitor for Prosecution:

| <u>Warden</u>                   | <u>Cases</u> | <u>State</u>  | <u>Violations</u>                                   |
|---------------------------------|--------------|---------------|---|
| Andersen*                       | 2            | Minnesota     | Hunting ducks prior to half an hour before sunrise. |
| Andersen*                       | 1            | Illinois      | Killing coot from motorboat                         |
| Barmeier                        | 2            | Missouri      | Killing wood ducks                                  |
| Birsch                          | 2            | Virginia      | Killing sora in excess of bag limit                 |
| Babson* and Barton***           | 1            | Massachusetts | Killing loon  |
| Bowers*                         | 1            | West Virginia | Killing bull-bats (nighthawks)                      |
| Diebold**, Messa**, and Stein** | 1            | Louisiana     | Killing rail  |
| Charlton                        | 1            | Ohio          | Killing grebes                                      |
| Holmes and Geilus*              | 2            | Nebraska      | Hunting ducks from motorboat                        |
| Hagar**                         | 2            | Massachusetts | Killing godwits                                     |
| Hagar**                         | 1            | Massachusetts | Killing knots                                       |
| Hagar**                         | 1            | Massachusetts | Killing turnstones                                  |
| Linebaugh                       | 1            | Kentucky      | Killing doves in close season                       |
| Linebaugh                       | 2            | Kentucky      | Killing wood ducks                                  |
| Mushbach                        | 2            | Montana       | Killing gulls                                       |
| Oberhaus*                       | 2            | Alabama       | Hunting doves in close season                       |
| Oliphant*                       | 2            | Virginia      | Hunting ducks after sunset                          |
| Pratt**                         | 3            | Massachusetts | Killing sandpipers                                  |
| Ransom                          | 2            | Washington    | Hunting ducks from motorboat                        |
| Shaver                          | 1            | Minnesota     | Hunting ducks after sunset                          |
| Shaver                          | 1            | Minnesota     | Hunting ducks after sunset and killing bitterns     |
| Shaver                          | 3            | Minnesota     | Hunting ducks in close season                       |
| Shaver and Lawton*              | 5            | Minnesota     | Hunting ducks after sunset                          |
| Smith                           | 3            | Maine         | Hunting ducks after sunset                          |
| Tonkin                          | 6            | Oregon        | Killing ducks in close season                       |
| Tonkin                          | 1            | Oregon        | Killing bitterns                                    |
| Whitehead                       | 2            | Georgia       | Killing doves in close season                       |

\* U. S. Deputy Game Warden

\*\* State Deputy Game Warden

\*\*\* Cooperator





## Migratory Bird Treaty Act Cases Terminated - Reports Received during October.

| <u>Warden</u>            | <u>Cases</u> | <u>State</u> | <u>Violation</u>                 | <u>Fine</u>                        |
|--------------------------|--------------|--------------|----------------------------------|------------------------------------|
| Andersen* and Shaver     | 2            | Iowa         | Killing ducks in close season    | \$10 and costs of \$9.60 each      |
| Barneier                 | 1            | Missouri     | Hunting ducks from motorboat     | \$10 and costs of \$16.80          |
| Barneier                 | 1            | Missouri     | Selling ducks                    | \$10 and costs of \$34.83          |
| Barneier                 | 3            | Missouri     | Hunting ducks in close season    | \$5 each and costs of \$12.85 each |
| Barneier                 | 1            | Missouri     | Hunting ducks in close season    | \$10 and costs of \$16.80          |
| Barneier                 | 1            | Missouri     | Killing ducks in close season    | \$5                                |
| Berquist*                | 2            | Illinois     | Killing insectivorous birds      | \$10 each                          |
| Birsch                   | 2            | Virginia     | Killing sora in excess bag limit | \$10 each                          |
| Birsch                   | 3            | N. C.        | Hunting ducks in close season    | \$20 each                          |
| Breitenbach*             | 3            | Iowa         | Killing ducks in close season    | \$10 each and costs                |
| Charlton                 | 1            | Ohio         | Hunting ducks after sunset       | Costs of \$45.92                   |
| Charlton                 | 1            | Ohio         | Killing grebes                   | \$10 and costs of \$12.95          |
| Kelsey                   | 3            | S. Dak.      | Hunting ducks from motorboat     | \$25 each                          |
| Lindgren*(a)             | 1            | Illinois     | Killing insectivorous birds      | \$10                               |
| Lindgren*(a)             | 1            | Illinois     | Killing insectivorous birds      | \$5                                |
| Lindgren*(a)             | 1            | Illinois     | Killing insectivorous birds      | \$20                               |
| Merrill, D.F.* and B. G. | 2            | Illinois     | Killing sandpipers               | \$10 each                          |
| Merrill, D.F.* and B. G. | 2            | Illinois     | Killing sandpipers               | \$5 each                           |
| Merrill, D.F.* and B. G. | 1            | Illinois     | Killing sandpipers               | \$20                               |
| Merrill, D.F.* and B. G. | 2            | Illinois     | Killing insectivorous birds      | \$15 each                          |
| Pacetti and Whitehead    | 1            | Georgia      | Killing doves in close season    | \$5                                |
| Vanselow*                | 1            | Illinois     | Killing grebe                    | \$10                               |
| Visart                   | 2            | Arkansas     | Selling ducks                    | \$25 each                          |
| Visart                   | 1            | Arkansas     | Selling ducks                    | \$1 and costs                      |
| Whitehead                | 2            | S. C.        | Hunting ducks in close season    | \$10 each                          |

\* U. S. Deputy Game Warden

\*\* State Deputy Game Warden

(a) Deceased



## ALASKA DIVISION

Frank Dufresne, formerly deputy U. S. marshal at Nome, has been appointed fur warden, effective October 23. His headquarters will be at Nome.

Harry G. Seller, who has been a deputy fur warden for a year past, stationed at Tyonic, has been appointed fur warden for a term of three months beginning November 1, with headquarters at Anchorage.

Donald H. Stevenson, reservation and fur warden at Unalaska, is patrolling the Bristol Bay region looking for violations of the fur law and regulations.

Three new permits for fur-farming on islands within the Aleutian Islands Reservation were issued during October. These permits cover Yohatanie, Small, and an unnamed island in Raven Bay, on the east side of Unalaska Island.

L. J. Palmer, assistant in charge of reindeer grazing investigations in Alaska, has completed his summer cruise on the Bureau's schooner Hazel, and is now getting the new experimental station and the new headquarters at Nome in shape.

Dr. Seymour Hadwen, reindeer specialist, who has been investigating the reindeer of Northern Europe for the past three months, completed his work on October 24.



# THE SURVEY

Monthly House-Organ of the Bureau of Biological Survey  
United States Department of Agriculture

Vol. 3

Washington, D. C., December 13, 1922.

No. 12.

THE SURVEY is issued for office and field men of the Biological Survey under authorization of the Chief of Bureau as a medium for furnishing information regarding the work of the Bureau, movements of the staff, changes in assignments, and news and personal items of importance to Bureau workers, with a view to increasing the interest of the personnel in the work of the Bureau as a whole and in each one's individual work as related to it. It is intended for employees of the Bureau, supplementary to the Departmental house-organ, The Official Record.

## GENERAL NOTES

Doctor Nelson, who was ill and in the hospital for two weeks with a heavy bronchial cold, is much improved, and it is hoped that he will be able to return to his desk again in a very short time.

The hearings before the subcommittee on Agriculture of the appropriations committee of the House of Representatives were held during the latter part of November, and on November 21 Doctor Nelson appeared before the committee to explain the work of the bureau in connection with the estimates submitted for the fiscal year 1924.

The Biological Survey was represented at the Ninth National Game Conference of the American Game Protective Association, held on December 11 and 12, 1922, at the Waldorf Astoria, New York City, by Messrs. Henderson, Fisher, Goldman, Riley, and Denmead. The program included an address by Mr. Goldman on "Relation of Forestry and Fire to Wild Animal Life", and one by Mr. Riley on the "Preservation of the Antelope".

The National Association of Commissioners and Secretaries of State Departments of Agriculture, which met in Washington, December 7 to 9, visited the offices of the Biological Survey on the afternoon of the 8th. They were conducted to the office of the chief, where, in the absence of Doctor Nelson, they were received by Mr. Henderson, Acting Chief. Explanations of the operations of the Bureau were made by Mr. Henderson, Doctor Fisher, Mr. McAtee, and Doctor Bell, the talks being well supported by exhibits filling one end of the large room, prepared by Mr. Morrison, of the Economic Investigations Division. The exhibits were grouped about a large national flag and consisted of skins of nearly all species of fur-bearing and predatory animals, maps showing the distribution of the principal rodent pests of the United States, and the location of predatory animal hunters, with posters used in campaigns against preda-





tory animals, native rodents, and rats, and in efforts to encourage winter feeding of birds, and also sample traps and poisons, and examples of rodent damage; maps showing the distribution of the principal fur animals and the location of fur farms in the United States; and mounted specimens of migratory birds and cases of aigrettes and other plumage seized from violators of the migratory-bird treaty and Lacey acts. At the speakers' desk was a chart of the Bureau organization and distribution copies of the annual report of the Bureau, first made available for release on that day. After leaving the Bureau the party was received by the Secretary.

The following publications of the Bureau were received in November:

S. R. A. No. 50, "Trapping of Fur-Bearing Animals on Big Lake Reservation, in the State of Arkansas."

Department Bulletin No. 1078, "Beaver Habits, Beaver Control, and Possibilities in Beaver Farming," by Vernon Bailey. (Issued October 13, 1922).

Department Bulletin No. 1091, "Life History of the Kangaroo Rat," by Charles T. Vorhies and Walter P. Taylor. (Issued September 13, 1922).

Among manuscripts submitted in November for approval for outside publication were the following:

Ashbrook, Frank G., "First Steps in Organizing the National Silver Fox Growers Association," for the Black Fox Magazine.

Bailey, Vernon, "The Apple Mouse," for Wallace's Farmer; and "Beaver Farming," for the Journal of Heredity.

Bell, Dr. W. B., "How the United States Government Safeguards Sheep Raising," for the National Wool Grower.

Jewett, S. G., "An Early Fall Record of the Hepburn Rosy Finch (*Leucosticte tephrocotis littoralis*)," for The Condor.

Ligon, J. Stokley, "Nesting of the Evening Grosbeak in Northern Michigan," for the Auk.

Mallock, J. R., "Exotic Muscaridae (Diptera)," for the Annals and Magazine of Natural History; and "The Recorded Caliphoridae of New Zealand (Diptera)," for the Transactions of the New Zealand Institute.

Metcalf, F. P., "Wild Duck Food Survey of North Dakota," for the Biennial Rept. N. Dak. Game and Fish Commission.

Oberholser, Dr. Harry C. (for Committee), "Eighteenth Supplement to the American Ornithologist's Union Check-List of North American Birds," for the Auk.

Taylor, Dr. W. P., "A Nest of the *Leucosticte* on Mount Dana, Tuolumne County, California," for The Condor.

#### BIOLOGICAL INVESTIGATIONS.

E. A. Goldman returned to Washington from his Western trip on November 23. After the close of his official work in Arizona late in October, he spent about three weeks on annual leave visiting relatives in California.

Arrangements have been made for the transfer of Dr. W. P. Taylor to Tucson, Ariz., where he will be in closer touch with the work now being carried on in cooperation with the University of Arizona and the Carnegie Institution, regarding the relation of various rodents to the range. His address is now in



care of the University of Arizona, Tucson, Arizona. In addition to continuing the work of the experimental areas, Doctor Taylor will make a special study of the habits of jack rabbits from the economic standpoint. He will also continue to work on his report on the birds and mammals of Washington.

Dr. Alexander Wetmore spent the period November 12 to 17 in southeastern Maryland investigating the status of the bobwhite. As is the case in various parts of Maryland and of other eastern States, large numbers of bobwhites from Texas have been liberated in that section during the past few years, and the effect of this strain on the native stock has become a matter of considerable interest. The specimens taken indicate an admixture, but the final report on the studies has not yet been prepared.

F. C. Lincoln continued during November the work of banding ducks at the grounds of the Sanganois Club near Browning, Ill. With the advent of general colder weather in the northern part of the country the ducks came down in greater numbers, and lately he has been able to band a large number of birds, mallards being especially numerous. Returns from many of these records have already been recieved, some from points to the south. The season for profitable work now being nearly over, he plans to bring his operations to a close within the next few days.

#### ECONOMIC INVESTIGATIONS

L. L. Thompson was appointed assistant predatory animal inspector, effective November 27, having passed the civil-service examination for the position. He has been assigned to assist R. E. Bateman in Montana, where his many years' experience as a predatory animal hunter and his familiarity with range conditions and livestock operations should increase his usefulness to the Bureau.

Harold W. Dobyns has been appointed assistant predatory animal inspector, effective November 16, and will take up his duties in the State of Washington as assistant to Glenn R. Bach. Mr. Dobyns has been employed by the Bureau as a predatory animal hunter and has established an enviable record for effective work. He passed the civil-service examination for the position and will add strength to the operating forces in Washington State.

James Silver, after conferring with the Director of Extension of the Agricultural Experiment Station, at Lynchburg, Va., in regard to a State-wide anti-rat campaign, proceeded to Athens, Ga., and completed details for a similar campaign in that State. Carlyle Carr, who is assisting him, will remain in Georgia until about December 13, to help carry through the campaign. While on this trip, Mr. Silver will also visit Florida to assist local authorities in Dade and adjacent counties in a campaign against rats and land crabs.

Frank G. Ashbrook, of the Washington office, and Dr. Karl B. Hanson, in charge of our experimental fur farm at Keeseville, N. Y., attended the fox show at Muskegon, Mich., held by the National Silver Fox Breeders' Association of America, December 6, 7, and 8. Doctor Hanson examined all foxes for disease





before they were permitted to enter the exhibition. Mr. Ashbrook spoke on outstanding problems incident to fox farming.

J. Stokley Ligon, who is making investigations in Alaska in connection with predatory animal work, wrote on November 14 that he had trapped four wolves during that month. Climatic and soil conditions make work in Alaska quite different from that in the United States.

A striking example showing how coyotes will drift with sheep bands as they are moved, is to be noted in the catch of ten coyotes which Assistant Inspector John W. Crook, of Colorado, made in seven days' time. He had placed his traps on a sheep driveway just as the flocks had started down from the summer ranges. Almost immediately thereafter he began catching coyotes that were following the sheep. He reports that the success he has started with will probably continue for at least three weeks.

E. F. Pope, of the Oklahoma-Arkansas district, reports that the exhibit of a live wolf was one of the features most attractive to visitors at the Little Rock fair. The value of this class of material was thoroughly demonstrated by the fact that it brought the inspector in touch with a number of people who are much interested in the control of predatory animals in Arkansas.

Hunter S. R. Dunham, of Utah, has made a record catch by getting 57 coyotes in 11 days. All these animals were poisoned.

C. G. Poole, of the California district, and G. R. Bach, of the Washington district, attended the Pacific International Live-stock Show, at Portland, November 10, and discussed matters of mutual interest with S. G. Jewett in connection with cooperative predatory animal work along the State borders.

#### FOOD HABITS RESEARCH

H. L. Viereck left on an extended trip to South America, on November 25, undertaken as a combined pleasure and scientific collecting trip, in the course of which he will visit M. A. Carriker, at Santa Marta, Colombia, and also spend some time in the Canal Zone and at other points enroute. Mr. Viereck will be on leave until after the middle of January.

#### GAME AND BIRD RESERVATIONS.

George M. Riddick, Warden of Big Lake Reservation, Ark., states that conditions have greatly improved regarding violations of the game laws and the regulations relating to the refuge. Decisions of the Federal Court of the Eastern District of Arkansas have resulted in gratifying progress in game protection. Of the many cases tried during the past few years, only an occasional one has been lost by the Government. Approximately 75 violators have been convicted, several have been sent to jail and heavy fines imposed, and several of the most persistent violators have been forced to leave the vicinity because of the enforcement of the game laws.



A warden's house has recently been built on the Big Lake Reservation. This was a much-needed improvement and will enable the wardens to render more efficient service, since the house is located on the highest point on the reservation, and immediately around it are the grounds where most of the hunting and trapping is done. A boat and Evinrude motor have been added to the equipment at Big Lake, the boat having been constructed at the reservation.

About the usual number of ducks are reported at Big Lake, but apparently there are more mallards than have been there for several years. More mallards than usual are coming to Dungeness Spit Reservation, Wash., also, and teals, pintails, and American widgeons are there in large numbers. At Lake Malheur Reservation, Oreg., the birds are numerous and in fine condition, especially the ducks.

Warden Perry E. Wetmore, Tampa Bay Group of Refuges, Fla., informs us that on November 12 he observed the first large group of white pelicans seen this season. They were located on an island near the entrance to Tampa Bay; about a week later the flock numbered 106.

The first elk to arrive at the Elk Refuge this season were seen on November 19, five in number; at the close of that week 15 were on the refuge.

D. C. Nowlin has been transferred from the Elk Refuge, Wyo., to take charge of Niobrara Reservation, Nebr.

Wire fencing was erected for a distance of 2.56 miles in the construction of the new game fence at Niobrara Reservation during the autumn. This was done under contract and, since the completion of the work contracted for, Inspector F. M. Dille has continued the construction of the fence in order to complete as much of it as possible before weather conditions should become unfavorable. When completed, the fence will be twelve miles long.

An interesting report on Clear Lake Reservation, Calif., has been received from Ira N. Gabrielson, Assistant Biologist, of the Economic Investigations Division. He states that when he visited Clear Lake on November 19, he found immense numbers of geese resting there and great strings also coming in from Tule Lake. Evidently, when disturbed on Tule Lake, they avail themselves of Clear Lake as a safe resting ground. Mr. Gabrielson says that the geese seemed to know that they were safe at Clear Lake as many flocks flew over his head within 20 or 25 yards. The geese are very wild and fly very high in Klamath Valley or around Tule Lake. Mr. Gabrielson also states that there are a great number of nests of pelicans, herons, and similar birds on the reservation, which shows that these birds used this area extensively as a breeding ground during the past season.

#### MIGRATORY BIRD TREATY AND LACEY ACTS

Charged with selling wild ducks and shipping them by mail in packages not marked to disclose the nature of contents, William T. J. Lewis, of Hopings, Va., was sentenced to jail for five months on December 5, 1922, by Judge Rose, presiding in the Federal Court in Baltimore, Md. This is one of the severest





jail sentences ever imposed for violation of the Migratory Bird Treaty Act. Lewis's method involved plucking the ducks and shipping them by parcel post with neither heads nor feet attached. Difficulty was experienced in securing evidence of his illegal activities and it was only after some of the ducks which he had shipped by mail had been seized, and letters obtained written by him to prospective customers offering wild ducks for sale, that the Government was warranted in proceeding with prosecution. When faced with prosecution for violation of the Migratory Bird Treaty Act or for using the mails to defraud, the defendant and his attorney decided it would be better to plead guilty to violation of the Migratory Bird Treaty Act. This resulted in the sentence indicated above. It is believed that the outcome of this case will have wholesome effect on persons who are prone to violate the Migratory Bird Treaty Act on the eastern shores of Virginia and Maryland where the Bureau has experienced considerable difficulty in securing an efficient enforcement of the law.

Senate Bill 1452, providing for the establishment of shooting grounds for the public, the establishment of game refuges and breeding grounds, the protection of migratory birds, and requiring a Federal license to hunt them, was passed by the Senate on December 6, the vote on the bill being 36 to 17. Several minor amendments were incorporated in the bill as it passed the Senate. A similar bill -- H. R. 5823 -- is pending in the House of Representatives, having been favorably reported by the Committee on Agriculture.

Warden Ransom is the recipient of congratulations and best wishes from friends in the field and in the Washington office on the birth of a daughter, November 16.

The following appointments were made to the position of U. S. Deputy Game Warden during November:

Perry Wetmore, Gulfport, Fla.  
Allen J. Stanley, Stirling City, Calif.  
Robert J. Sellers, Ama, La.  
Edward N. Scholler, 5107 So. Carpenter St., Chicago, Ill.  
William J. Willson, 4033 Clippert Ave., Detroit, Mich.  
Henry Fox, Mercer University, Macon, Ga.  
James P. McBurney, c/o L. E. Davis, Back Bay, Va.  
Clarence L. Doggrell, 30 Herron St., Montgomery, Ala.  
Charles Blow, 230 College St., Burlington, Vt.  
George R. Smalley, P. O. Box 611, Madera, Calif.

Appointments of the following U. S. Deputy Game Wardens were terminated during November:

Raymond S. Hughes, 1416 Wyoming St., El Paso, Tex.  
Foster A. Cannon, 238 Bull St., Savannah, Ga.  
Sherman Conover, Gen'l. Delivery, Mt. Vernon, Ohio.  
Oscar A. Germer, Savanna Proving Ground, Savanna, Ill.  
Hobart Johnson, Wardner, Idaho. (formerly R.#3, Canton, N.C.)





Archie M. Bonge, c/o State Game Warden's Office,  
Lincoln, Nebr.  
Roy B. Wales, c/o Special Agent's Office,  
Southern Pacific Railway, Dallas, Tex.  
Robert J. Fitzgerald, 420 E. 7th St., San Angelo, Tex.  
W. F. Wilson, Stephenville, Tex.  
Charles D. Erwin, 439 Westmoreland Ave., Houston, Tex.  
Earle M. Manint, 312 Highland Ave., Houston, Tex.

Migratory Bird Treaty Act Cases Terminated - Reports Received during November.

| <u>Warden</u>           | <u>Cases</u> | <u>State</u>  | <u>Violation</u>  | <u>Fine</u>               |
|-------------------------|--------------|---------------|---|---------------------------|
| Andersen* and Shaver    | 2            | Illinois      | Killing ducks in close season                               | \$25 each and costs       |
| Babson*                 | 1            | Massachusetts | Killing jacksnipe in close season                           | \$1                       |
| Birsch                  | 3            | Virginia      | Killing coot in close season                                | \$25 each                 |
| Birsch                  | 2            | Virginia      | Transporting more than daily limit                          | \$25 each                 |
| Bloxsom                 | 13           | Delaware      | Hunting ducks after sunset                                  | \$1 each                  |
| Bloxsom                 | 1            | Maryland      | Killing sandpipers  | \$10 and costs            |
| Bloxsom                 | 1            | Maryland      | Killing sandpipers  | \$50 and costs            |
| Bloxsom                 | 1            | Maryland      | Offering to sell and transporting ducks for purpose of sale | Five months in jail.      |
| Bloxsom                 | 1            | Virginia      | Killing dowitchers  | \$50                      |
| Bloxsom                 | 1            | Virginia      | Selling ducks   | \$10                      |
| Bloxsom and Derrickson* | 2            | Virginia      | Hunting ducks at night                                      | \$5 each                  |
| Britton                 | 3            | New Mexico    | Hunting ducks at night                                      | \$5 each                  |
| Charlton                | 1            | Ohio          | Killing ducks after sunset                                  | \$25 and costs of \$26.33 |
| Charlton                | 1            | Ohio          | Killing bitterns  | \$25 and costs of \$12.20 |
| Heap**                  | 1            | Nevada        | Killing doves in close season                               | \$10 and costs            |
| Holmes                  | 2            | Nebraska      | Killing ducks in close season                               | 16 days each in jail      |
| Holmes and Geilus*      | 2            | Nebraska      | Killing ducks from motorboat                                | \$25 each                 |
| Linebaugh               | 1            | Kentucky      | Killing doves in close season                               | \$25                      |
| Shupee                  | 1            | Texas         | Killing herons  | \$12                      |
| Shupee                  | 1            | Texas         | Killing meadowlarks   | \$1                       |
| Snupee                  | 2            | Texas         | Hunting ducks after sunset                                  | \$25 each                 |
| Tonkin                  | 1            | Oregon        | Killing bitterns  | \$15                      |

\* U. S. Deputy Game Warden

\*\* State Deputy Game Warden



## Migratory Bird Treaty Act cases reported to Solicitor for Prosecution:

| <u>Warden</u>  | <u>Cases</u> | <u>State</u>  | <u>Violation</u>                             |
|--|--------------|---------------|--|
| Andersen*  | 1            | Iowa          | Selling and serving ducks                    |
| Andersen*  | 1            | Illinois      | Killing wood ducks                           |
| Andersen*  | 3            | Iowa          | Hunting ducks after sunset                   |
| Bloxsom  | 13           | Delaware      | Hunting ducks after sunset                   |
| Bloxsom  | 1            | Virginia      | Killing blackbreasted plover in close season |
| Bloxsom,<br>Creighton*<br>Stemple* and<br>Anderson** | 2            | Maryland      | Exceeding bag limit on waterfowl             |
| Britton  | 3            | New Mexico    | Hunting ducks at night                       |
| Hilliard and<br>Pierce*                              | 2            | New Jersey    | Killing ducks after sunset                   |
| MacKenzie*   | 1            | Wisconsin     | Possessing skin of a pileated woodpecker     |
| Perry  | 3            | Arkansas      | Killing geese during close season            |
| Pierce*  | 2            | New Jersey    | Hunting ducks after sunset                   |
| Sellers**  | 2            | Louisiana     | Killing ducks and coots in close season      |
| Steele and<br>Cornell**                              | 1            | Oregon        | Killing band-tailed pigeons                  |
| Steele*  | 1            | Massachusetts | Possessing knot                              |
| Steele*  | 1            | Massachusetts | Killing turnstones                           |
| Trenis and<br>Earnshaw*                              | 3            | Virginia      | Hunting ducks during close season            |
| Tribou*  | 3            | Massachusetts | Killing sandpipers                           |

\* U. S. Deputy Game Warden

\*\* State Deputy Game Warden





## ALASKA DIVISION

Frank Dufresne, fur warden at Nome, is pushing the organization of a game and fish protective association at that place.

The Alaska Game Protective Association, at a meeting held recently at Ketchikan, endorsed the proposed new game and fur bill for Alaska, introduced in Congress by Delegate Sutherland.

Dr. Seymour Hadwen, reindeer specialist, who has been making a study of the reindeer of Northern Europe, has returned to Ottawa, Canada, where he is completing his reports to the Bureau.

The widespread interest in the reindeer industry in the Territory is evidenced by the many requests that are being received for copies of the new reindeer bulletin--Department Bulletin No. 1089.

L. J. Palmer, in charge of reindeer grazing investigations, advises that excellent quarters have been secured at Nome for experimental work, consisting of a house, barn, and corral--the corral being used for the reindeer on which feeding experiments are being conducted.

Another association of fox farmers was organized on November 15, the Southeastern Alaska Blue Fox Farmers' Association, at Petersburg. Fifty-nine fox farmers, representing forty-eight fox farms, attended the organization meeting. This association is similar to the one organized at Cordova on August 21.

F. Harding, of Kodiak, employed by Chief Fur Warden Walker as an assistant for patrol work on Kodiak and near-by islands, effected the seizure of skins trapped out of season of 3 otters, 7 cross foxes, 1 red fox, and 1 silver fox, on Afognak Island, the latter part of November, and turned them over to the deputy U. S. marshal.

H. G. Close, a Territorial game warden in the Copper River region, has been appointed a cooperating deputy fur warden, on the recommendation of Governor Bone. Mr. Close bears the reputation of being a very efficient warden and will be of great assistance to the Bureau in protecting land fur-bearing animals in that important section.

Through the activities of Walter G. Culver, an assistant to E. P. Walker, Chief Fur Warden at Juneau, two violators of the fur law regulations were apprehended. A total fine of \$220 was assessed against each, but one of them, being unable to pay the amount, was committed to jail for 110 days. Skins of 19 beavers, 2 minks, and 47 muskrats, reported to be unprime, were seized and turned over to the custody of the court.











